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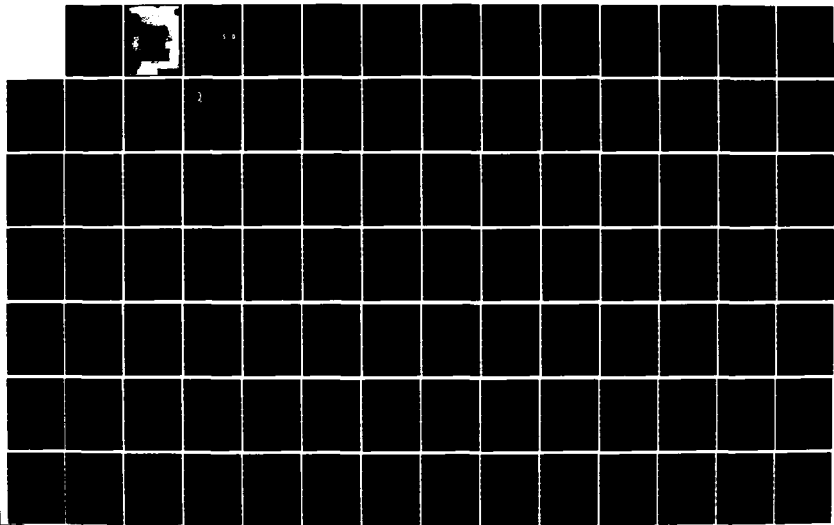
STRUCTURAL CONCEPT ANALYSIS REPORT FOR THE EAST COAST
AIR COMBAT MANEUVER. (U) CREST ENGINEERING INC TULSA OK
MAY 76 27-771-92-APP-C CHES/NAVFAC-FPO-7601-APP-C
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Engineering Command, Code FPO-1

STRUCTURAL CONCEPT ANALYSIS REPORT

FOR THE

EAST COAST AIR COMBAT MANEUVERING RANGE

OFFSHORE KITTY HAWK, NORTH CAROLINA

CONTRACT NO. N62477-76-C-0179

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FEB 20 1986
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REPORT NO. 27-771-92

APPENDIX C. THREE-PILE CONCEPT CALCULATIONS

Prepared for

NAVAL FACILITIES ENGINEERING COMMAND
DEPARTMENT OF THE NAVY
CHESAPEAKE DIVISION

CHESAPEAKE DIVISION, NAVY YARD
WASHINGTON, D.C. 20374

By

CREST ENGINEERING, INC.
TULSA, OKLAHOMA

May 1976

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SECTION 1

INTRODUCTION

1.1 INTRODUCTION

The major objective of this report is to establish an optimized three-pile ocean structure for the U.S. Navy Air Combat Maneuvering Range (ACMR) offshore North Carolina, U.S.A. This report constitutes a portion of the project report on the Structural Concept Analysis.

The function of this report is, therefore, to optimize a three-pile ocean structure so as to reflect a minimum steel weight under the environmental conditions compatible with those used previously in the design of skirt-pile structures.

The conceptual structure considered herein, a three-pile structure with equilaterally spaced jacket legs, is designed for a water depth of 84 feet (MLW). The anchoring of the structure is to be achieved by driving piles through the jacket legs into the seabed. Securing of the jacket is then accomplished by welding of shim plates along the annulus between the jacket leg and piling at the top of the jacket legs. A superstructure consisting of an equipment deck and a top deck will be installed to the piling above the jacket. A boat landing is to be furnished with the jacket. A set of stairways attached to the superstructure shall be furnished to provide connections among the boat landing, equipment deck and the top deck.

In order to attain the stated objective, a system optimization technique is employed in the course of establishing major structural member sizes and dimensions. An objective function of a minimum steel weight is formulated by treating the jacket base spacing as the univariable parameter subjected to the constraints of the drivability and axial load capacity of the piling. The selected structure is then analyzed to examine the member stresses and the reactions on the piling. The computation of the corrosion protection requirements follows. Finally, a three-pile ocean structure with piling size of 36 inches outside diameter and the jacket leg base spacing of 58 feet is established. The structure weighs approximately 500 tons.

1.2 DESIGN CRITERIA

Design criteria presented herein serve as guide lines in the conceptual development of the proposed three-pile structure. These criteria are listed as follows:

A. Environmental Criteria

MLW Depth	84 ft.
Storm Wave Height	62 ft.
Storm Wave Period	12 sec.
Maximum Storm Tide	10 ft.
Maximum Astronomical Tide	4 ft.
Maximum Current (for full depth)	5.4 ft./sec.
Wind Velocity	150 Knots @ (+)30 ft.

The approach of the storm wind and waves can be from any direction.

B. Foundation Criteria

- (1) The basis for the foundation design is a McClelland report to Cubic Corporation entitled "Foundation Investigation East Coast ACMR Ocean Structures, Volume I". The soil information to be used in this analysis is one boring at Site No. 1 in the aforementioned report.
- (2) Due to the nature of the sea bottom, and sea bottom currents, scouring of 5 feet below mudline will be used in the preliminary piling design to develop the theoretical soil resistance to laterally applied loads.

C. Live Loads

The live loads shall be as follows:

Equipment Deck	150 psf
Top Deck	100 psf

The loads shall be distributed uniformly over the entire deck areas.

D. Material

All structural shapes or fabricated tubular goods are assumed to be ASTM A-36 or equal.

E. Corrosion Protection

- (1) All portions of the platform above elevation $(-)4' - 0''$ shall be painted.
- (2) All main structural members located within the splash zone shall have an extra 1/2 inch of sacrificial steel added to their wall thickness. This can be in the form of extra wall thickness or a 1/2 inch steel plate wrap.
- (3) The portion of the platform below elevation $(-)4' - 0''$ will be protected by cathodic protection. This will be provided by sacrificial anodes having a theoretically expected life of ten years.

F. Miscellaneous

- (1) The platform is analyzed as if the annulus between the jacket and piling will be ungrouted.

The criteria employed for determination of structural acceptability are specified by the documents:

- (a) Specification API RP 2A, Recommended Practice for Planning, Designing and Constructing Fixed Offshore Platforms, 7th Edition, American Petroleum Institute, Dallas, Texas, 1976.
- (b) Manual of Steel Construction, 7th Edition, American Institute of Steel Construction, New York, N.Y., 1969.

1.3 DESIGN ASSUMPTIONS

Some assumptions to be used in this analysis are listed as follows:

True batter of piling and jacket leg	1:6
Equipment deck area	500 sq. ft.
Top deck area	1,200 sq. ft.
Spacing between decks	15 ft.

1.4 PROCEDURES OF ANALYSIS

The primary item of concern is the axial loads resulting in the maximum environmental forces. If the maximum required pile capacity is attainable through the available soil information, then the conceptual structure would be considered feasible. In order to obtain such information, Sections 2, 3, and 4 are first developed in this analysis.

A three-pile structure with variable base spacing is then considered under a given set of overturning moment (107,302 ft-kips)* and horizontal force (1,254.6 kips)*. Thus, the relationship between axial pile capacity and jacket base spacing under a set of given loads is established in Section 5.

Section 6 presents a system optimization procedures to select a structure which reflects the minimum steel weight and minimum spacing under the constraints of Sections 2 to 5.

The configuration of the selected structure is proposed (Section 7) and then idealized (Section 8) for further analysis. The basic loading conditions (detailed in Section 9) acting on the structure are computed in accordance with the design criteria. Finally, the selected structure is analyzed as a space frame structure under combinations of various basic loading conditions (Section 10). The structural member stresses from the space frame analysis are compared with the API and AISC Specifications. The structural reactions are again used to check the pile capacity requirements.

* Storm forces from skirt-pile structures under separate contract: Crest Offshore Job No. 27-621-00, to Cubic Corporation.

1.5 DESIGN SUMMARY

Some of the more significant results from the analysis are summarized as follows:

Environmental Forces:

Total wind and wave forces (including boat loading and stairway)	836.7 kips
---	------------

Total overturning moment (including boat landing and Stairway)	79,573 ft-kips
---	----------------

Pile Axial Loads:

Maximum compressive load	1,858 kips
--------------------------	------------

Maximum tensile load	1,463 kips
----------------------	------------

Structural Dimensions:

Piling

Outside diameter	36 in.
------------------	--------

Penetration below mudline	180 ft.
---------------------------	---------

Jacket

Spacing at mudline	58 ft.
--------------------	--------

Spacing at work-point level	29 ft.
-----------------------------	--------

Height	98 ft. 9 in.
--------	--------------

Superstructure

Equipment deck	25 ft. x 20 ft.
----------------	-----------------

Top deck	35 ft. x 35 ft.
----------	-----------------

Structural Steel Weight

Piling	545,836 lbs.
--------	--------------

Superstructure	138,907 lbs.
Jacket	<u>231,130 lbs.</u>
Total weight (excluding boat landing, stairway and miscellaneous items)	915,923 lbs.

1.6 PERSONNEL RESUMES

The personnel whose resumes follow were actively engaged in this project.

CREST OFFSHORE, INC.



Chingmiin (Charlie) Chern

Senior Engineer

<u>University</u>	<u>Degree</u>	<u>Year</u>
National Taiwan University	Bachelor of Science Civil Engineering	1961
North Dakota State University	Master of Science Civil Engineering	1966
Lehigh University	Ph. D. Civil Engineering	1969
Tulsa University	Graduate Study in Business Administration- Management	1974

Societies, Licenses,
and
Other Activities:

Member American Society of Civil Engineers
Member International Association of Structural and
Bridge Engineers
Member American Society of Engineering Education
Registered Professional Engineer in Oklahoma

Experience:

1973 to Present

Senior
Civil
Engineer

Crest Offshore, Inc.

Engaged in the feasibility studies, structural analysis and design of offshore structures, equipment supports and other various types of petroleum related civil engineering works. Assignments include:

- ... Evaluation of engineering designs from other agencies.
- ... Analysis and design of offshore structures for oil industry.
- ... Analysis and design of supports and foundations for onshore refinery facilities.
- ... Development of a sequence of computer programs for the analysis of offshore structures.

CREST OFFSHORE, INC.

Chingmiin (Charlie) Chern

Senior Civil Engineer

Experience Continued:

1969 to 1973

North Dakota State University

Associate
Professor of
Civil Engineering

Engaged in full-time lecture instruction for civil engineering (graduate school division) and construction management. Also served as consultant to local industry (undergraduate school division) in the area of computer applications in engineering.

1966 to 1969

Fritz Engineering Laboratory

Research
Assistant

Assisted in the design and testing of various types of steel structures.

1966

North Dakota State Highway Department

Highway
Engineer

Responsible for construction surveying.

1965

U.S. Forest Service

Assistant
Crew Chief

Assisted in surveying responsibilities.

SECTION 2

PIPE PILE CAPACITY CURVES

2.1 INTRODUCTION

Axial capacity curves are developed hereinafter for 30", 36", 39" and 42" diameter piling. The method utilized is the emperical procedures, as presented in the McClelland soils report, for pipe piles penetrating through sand and clay alternating strata. The 30" diameter curves are developed to demonstrate the ability to reproduce the McClelland curves and subsequently the same procedure is followed to produce the remaining curves.

by S. Schorn Client U.S. 622 Subject *Sh. Borehole Corrupt Analysis Graph*
 Date 3-21-76 Job No. 27-271-92 Calculation *Pipe Pile Capacity Graph*

2.2 SOIL DATA

Stratification

A generalized summary of the major soil strata at each site based on the log of boring is given in the following tabulations:

<u>Stratum</u>	<u>Boring 1</u> <u>Penetration, ft</u>		<u>Description</u>
	<u>From</u>	<u>To</u>	
I	0	56	Very dense gray fine sand and silty fine sand
II	56	78	Dense gray silty fine sand
III	78	146	Dense gray fine sand
IV	146	170	Medium dense-to-dense gray silty fine sand
V	170	297.5+	Very stiff brown-to-gray silty clay-to-moderately plastic clay

<u>Stratum</u>	<u>Boring 2</u> <u>Penetration, ft</u>		<u>Description</u>
	<u>From</u>	<u>To</u>	
I	0	33	Very dense gray fine sand
II	33	45	Very stiff-to-hard gray silty clay
III	45	114	Dense gray silty fine sand-to-silt below 90-ft penetration
IV	114	132	Firm-to-stiff gray silty clay
V	132	190	Medium dense gray sandy silt-to-silt below 160-ft penetration
VI	190	235	Medium dense-to-dense gray silty fine sand
VII	235	290	Very stiff gray silty clay
VIII	290	320.5+	Dense dark gray-to-gray fine sand

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Sheet 283 of 41

by C. G. King Client U. S. Navy Subject Shallow Foundation Analysis
 Date 3-1-72 Job No. 27-771-72 Calculation Final Capacity

Stratum	<u>Boring 3</u> Penetration, ft		Description
	<u>From</u>	<u>To</u>	
I	0	107	Dense-to-very dense tan-to-gray fine sand
II	107	160	Medium dense silty fine sand-to-sandy silt below 140-ft penetration
III	160	225	Very stiff-to-stiff gray silty clay
IV	225	243	Medium dense silty fine sand
V	243	260	Very stiff gray silty clay
VI	260	280	Dense gray silty fine sand
VII	280	292	Hard gray sandy clay
VIII	292	326.5+	Medium dense gray silty fine sand

Stratum	<u>Boring 3a</u> Penetration, ft		Description
	<u>From</u>	<u>To</u>	
I	0	175	Very dense-to-medium dense gray fine sand and silty fine sand
II	175	195	Gray clayey silt, slightly sandy
III	195	235	Stiff gray silty clay
IV	235	255	Medium dense-to-dense gray silty fine sand
V	255	275	Hard-to-very stiff gray silty clay
VI	275	289	Dense gray silty fine sand
VII	289	305	Very stiff gray moderately plastic clay
VIII	305	370.5+	Medium dense gray silty fine sand

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Sheet 2 of 2

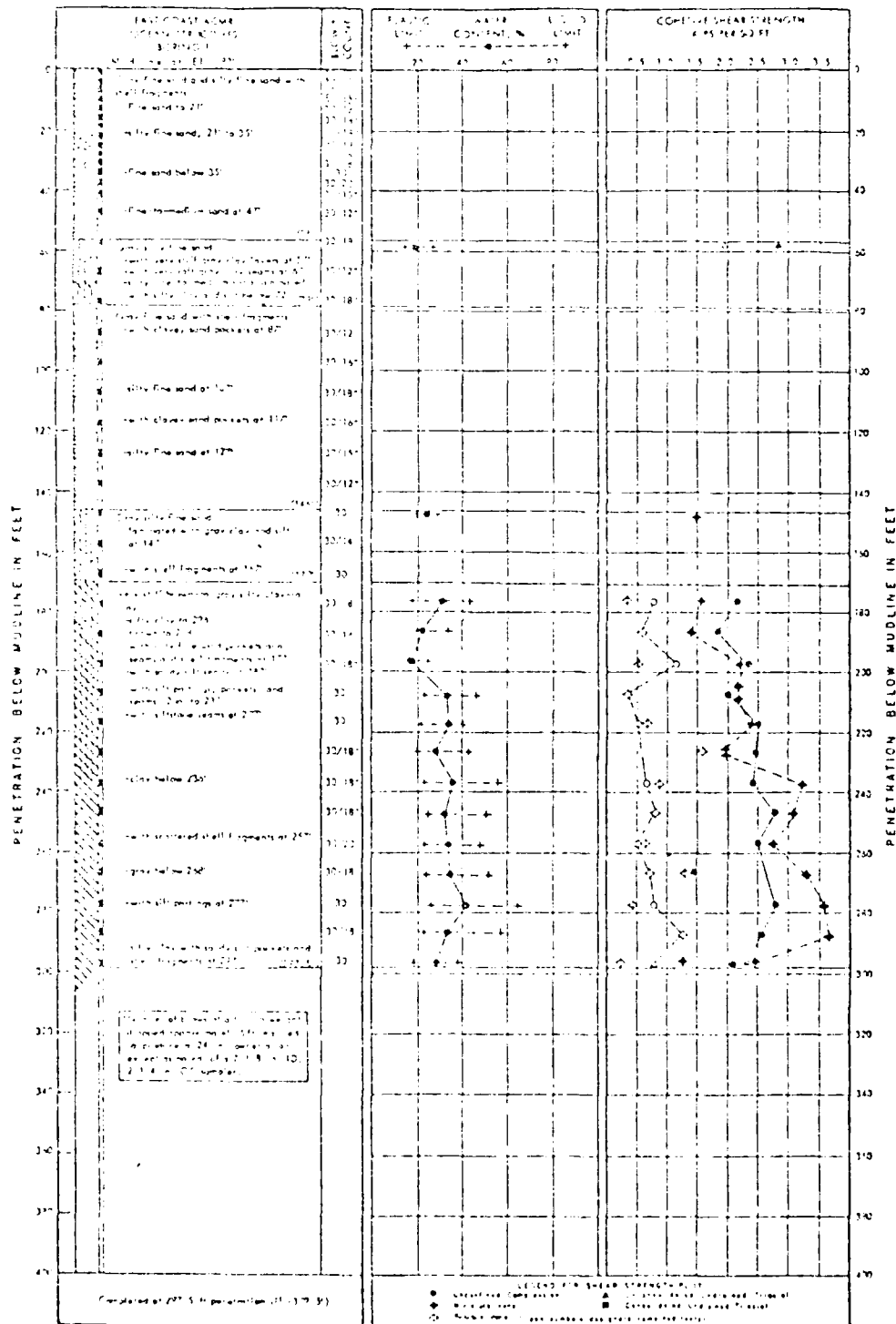
By C. Chao Client U.S. Navy Subject Soil Test Concept & Interpretation
 Date 8-1-77 Job No. 27-771-94 Calculation Pipe Pile Capacity

Stratum	Penetration, ft		Description
	From	To	
I	0	102	Very dense-to-dense tan-to-gray fine sand
II	102	136	Medium dense gray silt
III	136	170	Medium dense-to-dense gray silty fine sand
IV	170	207	Dense-to-very dense tan-to-gray fine sand
V	207	250	Very stiff gray moderately plastic clay
VI	250	275	Medium dense gray silt
VII	275	330.5+	Very stiff gray silty clay

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By C. C. Hines Client U.S. Navy Subject Soil Boring Log for Project 100-100
 Date 7-1-61 Job No. 27-721-2-2 Calculation Page 2 of 2

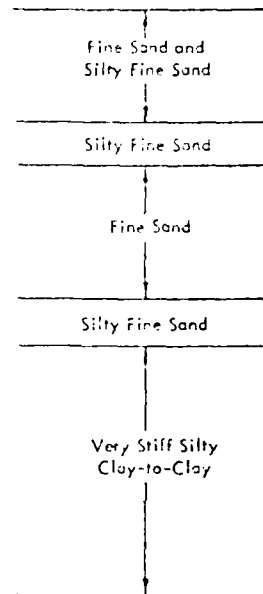
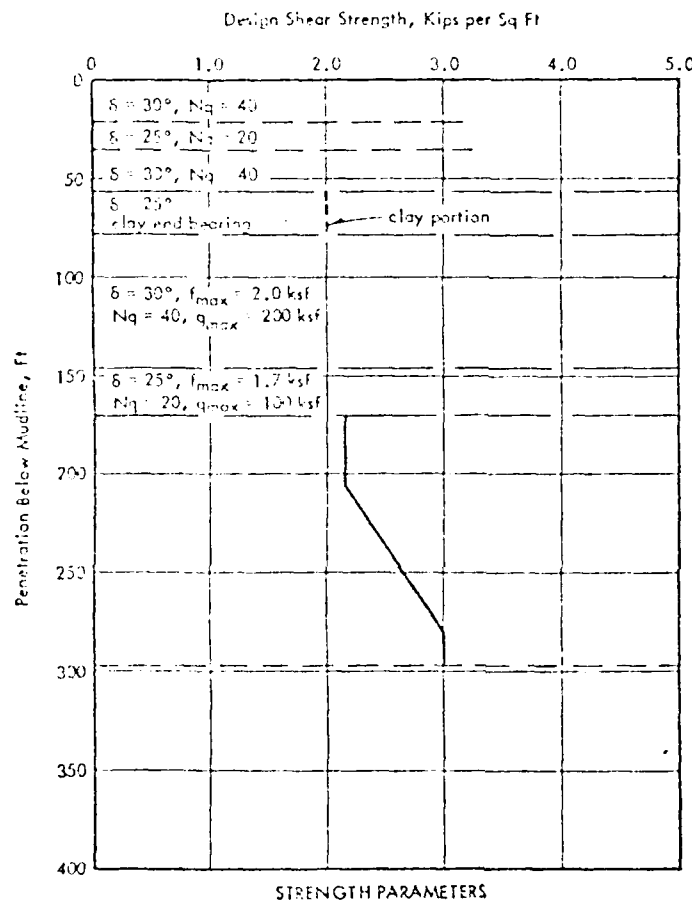


LOG OF BORING AND TEST RESULTS

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Sheet 2.56 of 1.1

by G. S. Smith Client U.S. NAVY Subject Stationary Gravity Anchorage
 Date 1-17-76 Job No. 77-171-1000 Calculation Pipe Pile Capacity Curves

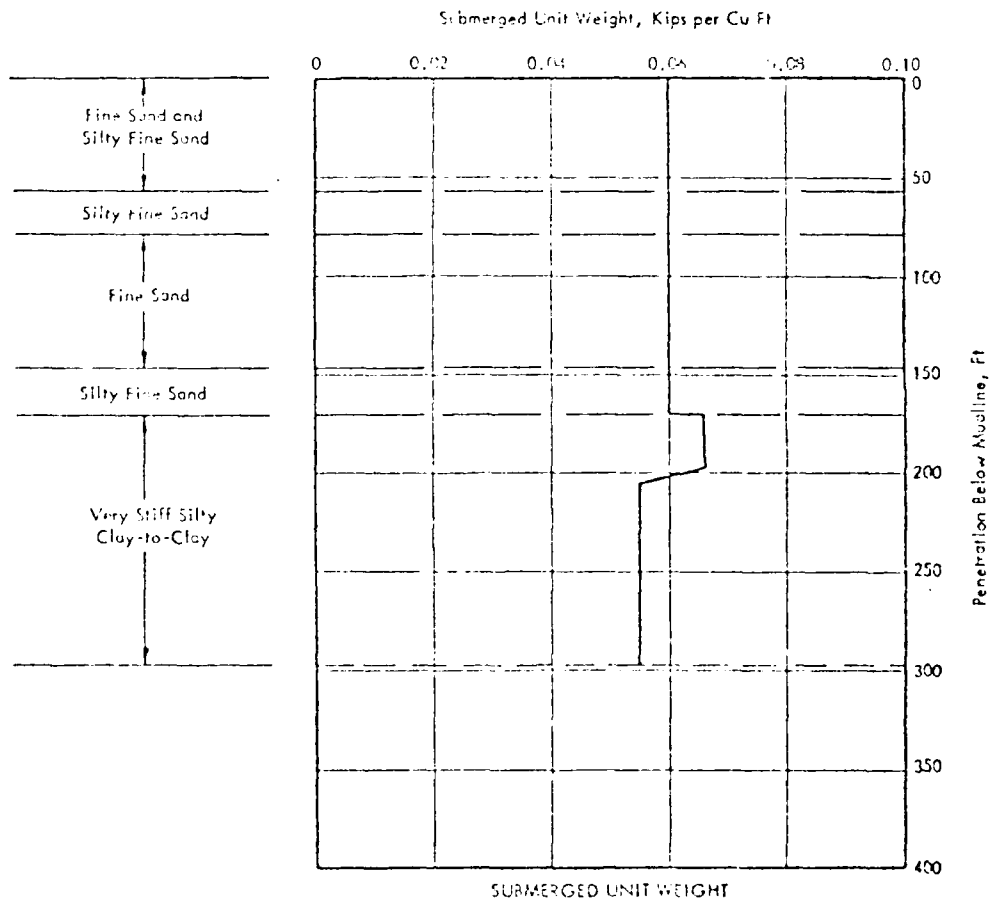


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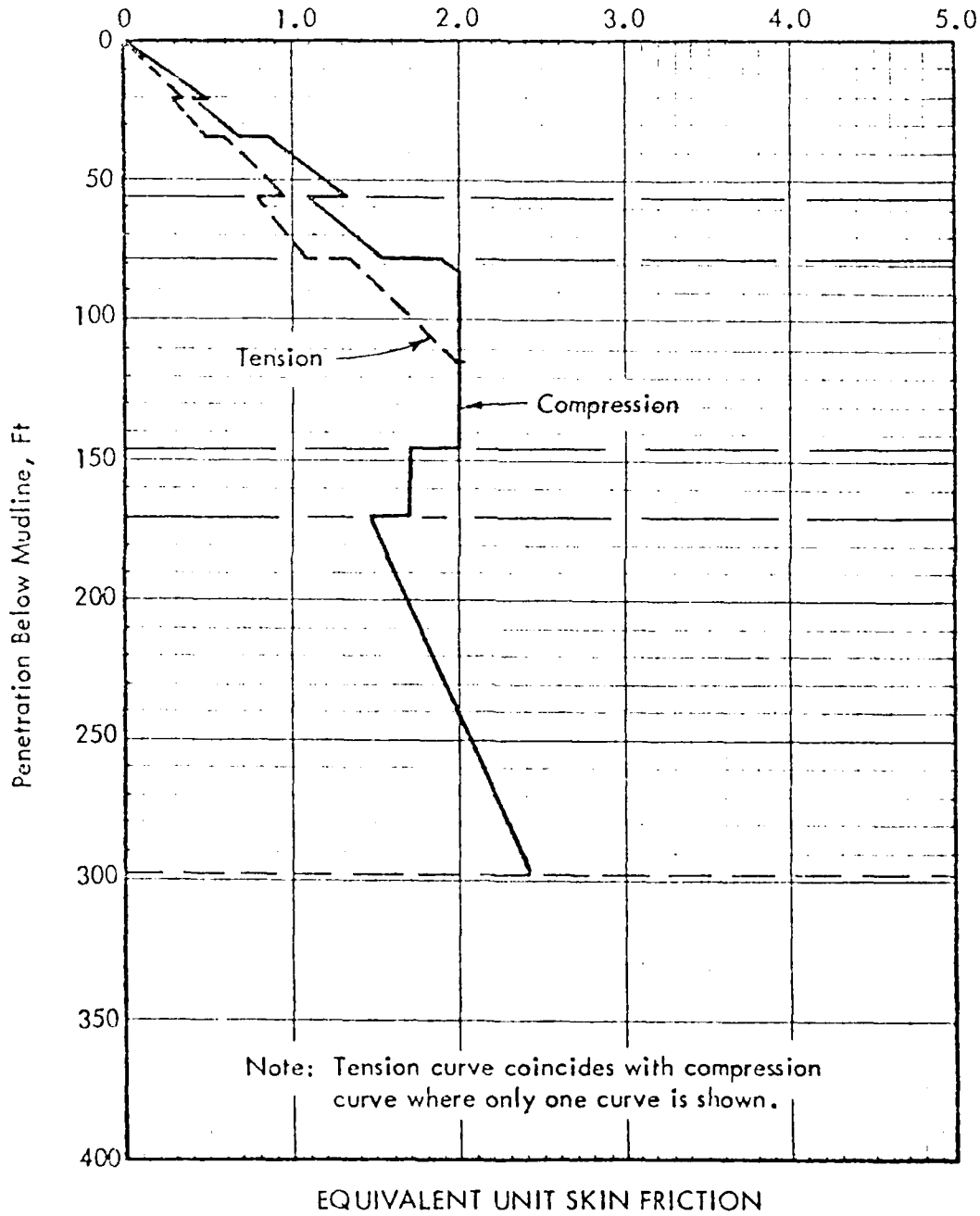
by C.C. Brown Client U.S. NAVY
Date 3-21-76 Job No. 27771-3

Subject *Structure Co. and Foundation*
Calculation *Penetration Capacity Chart*



By C. Clark Client U.S. Navy Subject Static and Dynamic Analysis
 Date Feb 11 1966 Job No. 47-1721-14 Calculation Pile Capacity Curves

Equivalent Unit Skin Friction, Kips per Sq Ft



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Sheet 2 of 4

By C. Chern Client U.S. NAVY Subject Structural Concept Analysis
 Date 3-31-76 Job No 27-771-92 Calculation Pile Capacity Curves

PENETRATION BELOW MUDLINE	UNIT SKIN FRICTION	UNIT END BEARING	SEGMENT LENGTH
FT	KSF	KSF	FT
0	0	-	20
20	0.39	-	15
35	0.60	-	21
56	0.80	-	23
79	1.35	-	3
82	1.40	-	25
107	2.00	-	8
115	2.00	-	30
145	1.70	-	25
170	1.43	-	35
205	1.72	-	75
280	2.30	-	20
200	2.30	-	

2300 ft

UNIT CAPACITY IN TENSION

By C. P. [unclear] Client H. S. [unclear] Subject Structural Capacity for [unclear]
 Date 3-31-85 Job No. 27-774-22 Calculation Pile Pile Capacity Curves

2.3 PILE CAPACITY IN COMPRESSION

$$Q = Q_s + Q_p$$

where Q_s = skin friction on the wall of the pile

Q_p = end bearing

DEFINITION:

For Cohesive Soils

$$Q_s = \lambda (\bar{\sigma}_m + 2 C_m) A_s$$

where $\bar{\sigma}_m$ = mean effective vertical stress between the mudline and the pile tip

C_m = mean undrained cohesive shear strength along the pile length

λ = dimensionless frictional capacity coefficient (function of pile penetration.)

A_s = embedded surface area of the pile

Granular Soils

$$Q_s = f A_s$$

where f = the unit skin friction between soil and pile

$$f = K \bar{\sigma}_h \text{ to } \delta$$

K = coefficient of lateral earth pressure

By C. Chera Client U.S. NAVY Subject Shallow Coapt Analysis
 Date 3-31-76 Job No 77-771-74 Calculation Pipe Pile Capacity Curves

$\bar{\sigma}_v$ = effective vertical stress

δ = angle of friction, $\delta = 0$ for dense material and $\delta = \phi$ for pile

Note: $K = 0.7$ for compressive load
 $= 0.5$ for tensile load

END BEARING:

$$Q_p = q A_p$$

Cohesive Soils

$$q = c N_c$$

where c = cohesive shear strength

N_c = a dimensionless bearing capacity factor
 (a value of q is assumed)

Granular Soils

$$q = \bar{\sigma}_v N_q$$

where $\bar{\sigma}_v$ = effective vertical stress

N_q = a dimensionless bearing capacity factor
 which is a function of ϕ , the angle of internal friction of the material

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Sheet 214 of 41

By S. J. H. H. Client U. S. Navy Subject Design of Concrete Gravity Pier
 Date 2-2-66 Job No. 6-77-9-1 Calculation Penetration Drawn 2-2-66

Skin Friction Capacity ($Q_s = f_{os} A_s$)

--- Compression ---

$$O.D. = 30"$$

$$A_s = \pi D (sL) = 7.854 (sL) \text{ sq. ft.}$$

Penetration Below Mudline (ft)	Unit Skin Friction (ksf)	Avg. Unit Skin Friction f_{os} (ksf)	Segment Length (ΔL) (ft)	Sk. Friction in Segment (kip)	Total Sk. Friction (kip)
0	0				0
20	0.45	0.225	20	35.3	35.3
20	0.40	0.335	15	58.0	93.3
35	0.67				
35	0.85	1.075	21	177.3	275.8
56	1.30				
56	1.10	1.375	23	248.4	524.2
79	1.65				
79	1.80	1.950	3	45.9	570.1
82	2.00				
82	2.00	2.00	25	392.7	962.8
107	2.00				
107	2.00	2.00	8	125.7	1088.5
115	2.00				
115	2.00	2.00	30	471.2	1559.7
145	2.00				
145	1.70	1.70	25	333.3	1893.0
170	1.70				
170	1.48	1.60	35	430.8	2323.8
205	1.72				
205	1.72	2.01	75	1134.0	3457.8
280	2.30				
280	2.30	2.35	20	364.1	3821.9
300	2.10				
			$\Sigma = 300 \text{ ft}$		

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Sheet 415-6

Client: U.S. NAVY Subject: Stringer Trench Corrosion Allowance
 Date: 3-21-76 Job No: 22-771-24 Calculation: 14-112 Capacity Calculations

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Compression ---

O.D. = 36"

$A_s = \pi D (\Delta L) = 2,325 \Delta L$ sq. ft

Penetration Below Mudline (ft)	Unit Skin Friction (ksf)	Aver. Unit Skin Friction f_{as} (ksf)	Segment Length (ΔL) (ft)	Skin Friction in Segment (kip)	Total Skin Friction (kip)
0	0				
20	0.45	0.225	20	46.4	46.4
20	0.40	0.225	15	34.8	118.0
35	0.67				
35	0.85	1.075	21	248.8	332.0
56	1.30				
56	1.10	1.375	23	273.1	605.1
79	1.65				
79	1.40	1.950	3	55.1	660.2
82	2.00				
82	2.00	2.00	25	471.3	1155.3
107	2.00				
107	2.00	2.00	8	150.8	1306.1
115	2.00				
115	2.00	2.00	30	565.5	1871.6
145	2.00				
145	1.70	1.70	25	400.5	2272.0
170	1.70				
170	1.48	1.60	35	527.8	2800.0
205	1.72				
205	1.72	2.01	75	1410.8	4210.8
280	2.30				
280	2.30	2.35	20	443.0	4653.8
300	2.40				
			$\Sigma = 200$ ft		

By C. S. [unclear] Client U.S. NAVY Subject Structural Concept Analysis (2-1-79)
 Date 3-21-76 Job No. 27-77L-92 Calculation Pipe Pile Capacity Curves

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Compression ---

$$O.D. = 39"$$

$$A_s = \pi D (\Delta L) = 10.21 (\Delta L) \text{ sq. ft}$$

Penetration Below Mudline (ft)	Unit Skin Friction (ksf)	Avg. Unit Skin Friction f_{as} (ksf)	Segment Length (ΔL) (ft)	Skin Friction in Segment (kips)	Total Skin Friction (kips)
0	0				0
20	0.45	0.225	20	45.9	45.9
20	0.40	0.335	15	81.9	127.8
35	0.67				
35	0.85	1.075	21	230.5	358.3
56	1.30				
56	1.10	1.375	23	322.9	681.2
79	1.65				
79	1.70	1.950	3	59.7	740.9
82	2.00				
82	2.00	2.00	25	510.5	1,251.4
107	2.00				
107	2.00	2.00	8	163.4	1,414.8
115	2.00				
115	2.00	2.00	30	612.6	2,027.4
145	2.00				
145	1.70	1.70	25	433.9	2,461.3
170	1.70				
170	1.45	1.60	35	571.8	3,033.1
205	1.72				
205	1.72	2.01	75	1539.2	4,572.3
280	2.30				
280	2.30	2.35	20	474.9	5,047.2
300	2.40				
			$\Sigma = 300 \text{ ft}$		

CREST OFFSHORE, INC.

Sheet 21 of 41

By C. Chong Client U.S. NAVY Subject St. Anthony Concept / Analysis
 Date 3-1-78 Job No 27-77L-12 Calculation Pipe Pile Capacity - Compression

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Compression ---

O.D. = 42"

$A_s = \pi D (\Delta L) = 10.996 (\Delta L)$ SQ. FT

Penetration Below Mudline (ft)	Unit Skin Friction (ksf)	Avg. Unit Skin Friction f_{as} (ksf)	Segment Length (ΔL) (FT)	Sk. Friction in Segment (kips)	Total (kips) Skin Friction
0	0				0
20	0.45	0.225	20	49.5	49.5
20	0.40				
35	0.67	0.535	15	88.2	137.7
35	0.85				
56	1.30	1.075	21	248.2	385.9
56	1.10				
79	1.65	1.375	23	347.7	733.6
79	1.80				
82	2.00	1.950	3	64.5	798.1
82	2.00				
107	2.00	2.00	25	549.8	1347.9
107	2.00				
115	2.00	2.00	8	175.9	1523.6
115	2.00				
145	2.00	2.00	30	659.8	2183.4
145	1.70				
170	1.70	1.70	25	457.3	2640.7
170	1.48				
205	1.72	1.60	35	615.8	3256.5
205	1.72				
220	2.20	2.01	75	1557.6	4814.1
220	2.20				
280	2.20				
300	2.40	2.35	20	519.8	5333.9
			$\Sigma = 300$ ft		

CREST OFFSHORE, INC.

Sheet 213 of 41

By W. L. Smith Date 11.5.1972 Subject Structural Concept Analysis
 Date 11.5.1972 Job No. 44-111-192 Calculation Pier Pole Design

Date 11/1/77 Job No. 4-1-111-92 Calculation Flow Rate Control Chart

$$C_1 \otimes C_2 \otimes \dots \otimes C_n \quad (Q_p = \sum A_p)$$

3. months E. half 1934	4. months E. half 1934	5. months Apr 4. 21 1934	6. months Apr 4. 21 1934	7. months Apr 4. 21 1934	8. months Apr 4. 21 1934
0	0	0	0	0	0
20	0	44.2	62.6	74.7	56.6
30	0				
40	20	98.2	141.4	166.0	132.4
50	20				
60	30	171.9	247.5	290.5	333.7
70	18	33.4	127.3	143.4	173.2
79	18				
79	105	515.6	742.4	871.5	1,010.1
79	115	564.7	813.1	954.5	1,103.3
82	115				
107	200	982.0	1,414.0	1,660.0	1,324.0
107	200				
115	200				
115	200				
145	200				
145	100	491.0	707.0	830.0	962.0
170	100				
170	20	98.2	141.4	166.0	132.4
205	20				
205	20				
235	28	137.5	193.0	232.4	269.4
235	28				
300	28				

By C. S. Shaw Client U.S. Navy Subcontractor Concept Analysis (C-10)
 Date Feb 1966 Job No. 2-12-12-13 Calculation Pipe pile Capacity, Comp.

Ultimate Pile Capacity, $(Q - Q_c + Q_p)$ --- Compression

Penetration Subsoil (ft)	30" ϕ Q_c (KIP)	36" ϕ Q_c (KIP)	39" ϕ Q_c (KIP)	42" ϕ Q_c (KIP)
0	0	0	0	0
10	77.5	106.2	120.6	136.1
20	176.7	239.4	293.8	330.1
30	447.7	573.3	643.3	722.6
36	364.2	432.1	507.7	553.1
70	612.6	756.2	830.6	906.3
79	1,033.7	1,271.3	1,552.7	1,743.7
82	1,134.5	1,437.1	1,695.4	1,904.2
82				
107	1,344.3	2,569.3	2,911.4	3,271.7
107				
115	2,070.3	3,720.1	3,074.3	3,447.6
115				
143	2,641.7	3,285.6	3,627.4	4,107.4
143	2,050.7	2,578.6	2,857.4	3,143.4
170	2,234.5	2,977.2	3,291.3	3,612.7
170	1,841.7	2,413.6	2,627.3	2,842.7
200	2,431.5	2,940.4	3,199.1	3,458.5
200				
240	3,604.3	4,418.2	4,804.7	5,193.5
280				
300	4,223.9	4,861.8	5,284.4	5,710.3

CREST OFFSHORE, INC.

Sheet 2122 of 41

Client U.S. Navy Subject Structural Concept/Design
 Date 4-1-75 Job No 22-71-74 Calculation Pile Pile Capacity Curve

Design Pile Capacity ($Q_u = Q / F.S.$) --- Compression

F.S. = 1.5

Depth (ft)	30" Q_u (KIPS)	36" Q_u (KIPS)	39" Q_u (KIPS)	42" Q_u (KIPS)
0	0	0	0	0
20	53.0	70.7	80.4	90.7
33	131.1	172.9	193.9	220.1
56	298.5	385.3	432.5	481.7
79	422.8	504.1	553.7	604.5
102	693.1	914.2	1,035.1	1,162.5
125	764.3	982.1	1,120.3	1,269.3
148	1,294.5	1,712.9	1,940.9	2,181.1
171	1,380.3	1,813.4	2,043.3	2,298.4
194	1,674.5	2,190.4	2,452.3	2,738.3
217	1,367.1	1,719.1	1,904.9	2,095.9
240	1,533.7	1,986.1	2,194.2	2,403.5
263	1,627.8	1,609.1	1,751.5	1,895.1
286	1,621.0	1,962.9	2,132.7	2,305.7
309	2,435.5	2,943.9	3,203.1	3,462.3
332	2,692.6	3,241.2	3,522.9	3,806.9

By C. Chace Client U.S. Navy Subject Structural Concept Development
Date 4-1-75 Job No. 22-771-11 Calculation Pipe Pile Capacity Curve

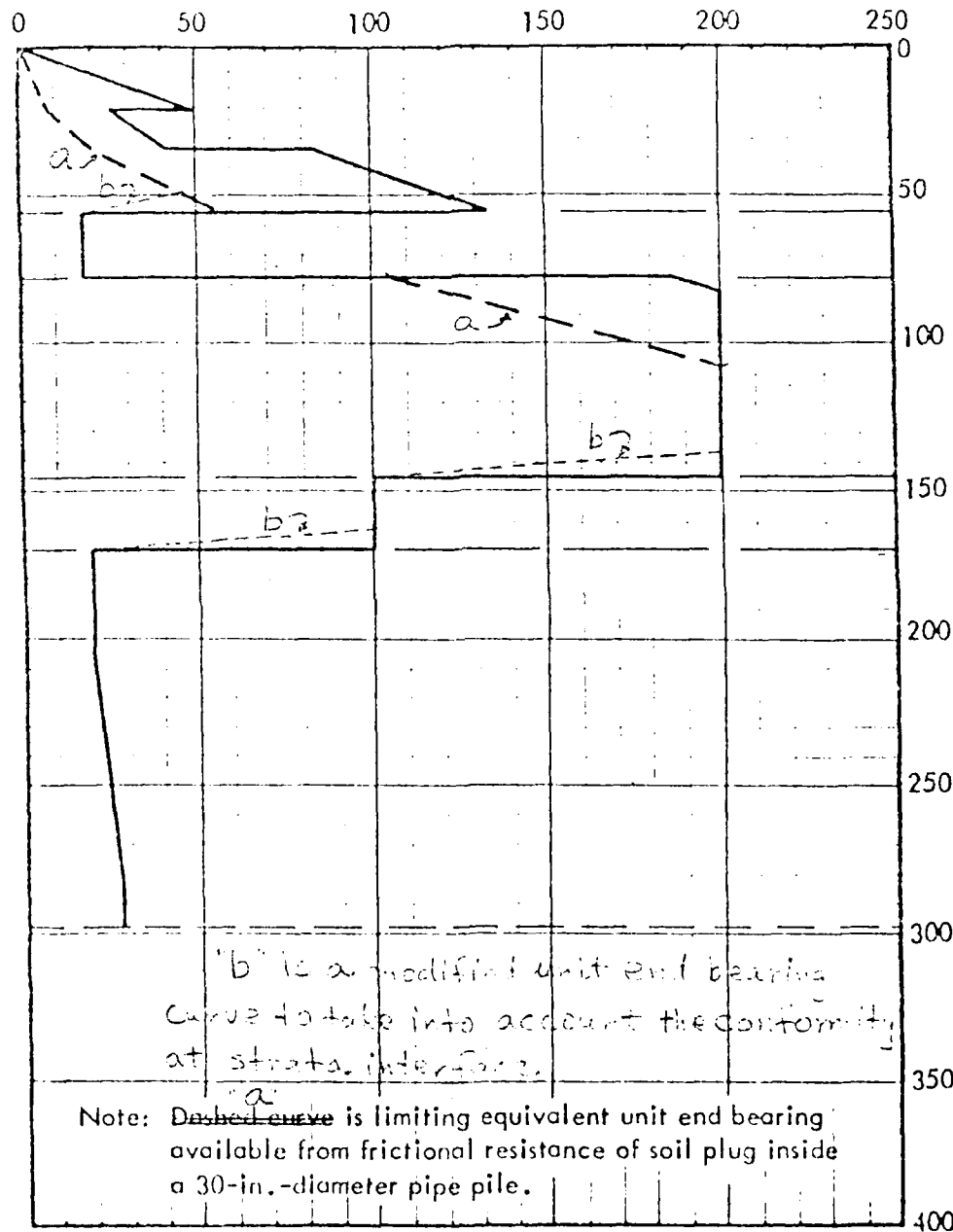
Modification on Unit End Bearing Capacity

It is assumed that the unit end bearing capacity of the higher strength stratum reduces linearly at 3-D (pile outside diameter) distance above the strata intersurface to conform with that of the lower strength stratum.

for 50" O.D. pipe pile	3-D = 7.5 ft
36" O.D.	= 9.0
39" O.D.	= 9.75
42" O.D.	= 10.5

By C. J. [unclear] Client [unclear] Subject Offshore Concept Design
 Date 11-17-79 Job No. 210001 Calculation Pile End Bearing

Unit End Bearing, Kips per Sq Ft



UNIT END BEARING

By CEC Client Ch. S. & A. V. L. Subject The Trencher Company Bridge
 Date 4-1-77 Job No. 27-771-35 Calculation Pipe Pile Design

30-in. Diameter Pipe Piles

(1) At Penetration 48.5 ft (=56'-7.5')

$$\text{End Bearing } Q_p = (46 \text{ ksf}) \times (4.91') = 225.9 \text{ kips}$$

$$\begin{aligned} \text{Skin Friction } Q_s &= 93.5 + 1.075 \times (21 - 7.5) \times 7.854 \\ &\quad (\text{see pg 2-14}) \\ &= 93.5 + 114.0 \\ &= 207.5 \text{ kips} \end{aligned}$$

$$\text{Ultimate Capacity } Q = 225.9 + 207.5 = 433.4 \text{ kips}$$

$$\text{Design Capacity } Q_d = 207.5 \text{ kips}$$

(2) At Penetration 137.5 ft (=145'-7.5')

$$\text{End Bearing } Q_p = (200 \text{ ksf}) \times (4.915') = 982 \text{ kips}$$

$$\begin{aligned} \text{Skin Friction } Q_s &= 1038.5 + 2.0 \times (30 - 7.5) \times 7.854 \\ &\quad (\text{see pg 2-14}) \\ &= 1038.5 + 353.4 \\ &= 1,441.9 \text{ kips} \end{aligned}$$

$$\text{Ultimate Capacity } Q = 1,441.9 + 982 = 2,423.9 \text{ kips}$$

$$\text{Design Capacity } Q_d = 1,441.9 \text{ kips}$$

CREST OFFSHORE, INC.

Sheet 4 of 4

Client: Chesapeake Energy

Subject:

Foundation Concept Analysis

Date: 4-1-11 Job No: 230001

Calculation:

Pile Pile Capacity Check

1. End Bearing 112.5 ksf (1701 psf)

End Bearing

$$Q_p = (3.14 \times 1.5) \times (112.5) = 491 \text{ kips}$$

SK. Friction

(See p. 2.14)

$$Q_s = 1557.7 + 170(25 - 7.5) \times 7.33 \times$$

$$= 1557.7 + 2522.7$$

$$= 1,793.4 \text{ kips}$$

Ultimate Capacity

$$Q_u = 1,793.4 + 491.0$$

$$= 2,284.4 \text{ kips}$$

Design Capacity

$$Q_d = 1,552.9 \text{ kips}$$

by C. Chapp Client U.S. NAVY Subject Structural Concept Analysis (Gage)
 Date 4-1-76 Job No 22-221-73 Calculation Pipe Pile Capacity

36-in. Diameter Pipe Piles

(1) At Penetration 47.0 ft (56'-9.0")

End Bearing

$$Q_p = (46 \text{ ksf}) \times (7.07 \text{ sq ft}) = 325.2 \text{ kips}$$

Skin Friction
(see p. 2-15)

$$Q_s = 118.0 + 1.075(21-9) \times 9.425$$

$$= 118.0 + 121.6$$

$$= 239.6 \text{ kips}$$

Ultimate Capacity

$$Q = 239.6 + 325.2 = 564.8 \text{ kips}$$

Design Capacity

$$Q_d = 376.5 \text{ kips}$$

(2) At Penetration 136 ft (= 145'-9")

End Bearing

$$Q_p = (200 \text{ ksf}) \times (7.07 \text{ ft}^2) = 1,414 \text{ kips}$$

Skin Friction
(see p. 2-15)

$$Q_s = 1,306.1 + 2.0 \times (30-9) \times 9.425$$

$$= 1,306.1 + 395.9$$

$$= 1,672 \text{ kips}$$

Ultimate Capacity

$$Q = 1,672 + 1,414 = 3,086.0 \text{ kips}$$

Design Capacity

$$Q_d = 2,057.3 \text{ kips}$$

by Carlton, Chong, & Co., Inc. Subject Structural Concept for Offshore
 Date 11/13/88 Job No. 22-221-32 Calculation Pile Capacity Calc.

(iii) At Pile tip 161.0 ft (=170'-9.0')

End Bearing $Q_p = (100 \text{ Ksf}) (11.07 \text{ sq ft}) = 707 \text{ Kips}$

Skin Friction
 (See pg. 2-15) $Q_s = 1371.6 \div 1.70 = 200-9, 19.425$

$$= 1371.6 \div 256.4$$

$$= 2,123 \text{ Kips}$$

Ultimate Capacity $Q_u = 2,123 + 707 = 2,830 \text{ Kips}$

Design Capacity $Q_d = 1390 \text{ Kips}$

3. C. Chong Client U.S. NAVY Subject Structural Concept Analysis
 Date 1-7-72 Job No. 42-771-72 Calculation Pipe Pile Capacity

39-in. Diameter Pipe Piles

(i) At Penetration 46.25' (=56'-9.75')

End Bearing $Q_p = (16 \text{ ksf}) \times (8.30 \text{ ft}) = 132.8 \text{ kips}$

Skin Friction $Q_s = 127.5 + 1.075 \times (21 - 9.75) \times 10.21$
 (See p. 2-16)

$$= 127.5 + 123.5$$

$$= 251.0 \text{ kips}$$

Ultimate Capacity $Q = 132.8 + 251.0 = 383.8 \text{ kips}$

Design Capacity $Q_d = 228.3 \text{ kips}$

(ii) At Penetration 139.25' (=149'-9.75')

End Bearing $Q_p = 200 \times 8.30 = 1,660 \text{ kips}$

Skin Friction $Q_s = 1,412.8 + 2.0 \times (30 - 9.75) \times 10.21$
 (See p. 2-16)

$$= 1,412.8 + 413.5$$

$$= 1,826.3 \text{ kips}$$

Ultimate Capacity $Q = 1,826.3 + 1,660 = 3,486.3 \text{ kips}$

Design Capacity $Q_d = 2,329.3 \text{ kips}$

Client U. S. M. P. Subject Structural Capacity Analysis
 Date 9-1-76 Job No. 22-771-22 Calculation Pile Capacity

At Pile-Location 165.5 ft (120' - 9.75')

End Bearing $Q_4 = 100 \times 8.30 = 830 \text{ kips}$

Sk. Friction
(see p. 2.16)
 $Q_2 = 2.0274 + 1.70(25 - 9.75) \times 10.21$
 $= 2.0274 + 264.7$
 $= 2.074.1 \text{ kips}$

Ultimate Capacity $Q_u = 2.074.1 + 830 = 3.122.1 \text{ kips}$

Design Capacity $Q_d = 2.081.4 \text{ kips}$

By S. Chien Client M. S. NPLV Subject Structural Group Analysis
Date 4-1-76 Job No. 22-72-22 Calculation Pipe Pile Capacity

42-In Diameter Pipe Piles

(1) At Penetration 40.5' (=55'-10.5')

End Bearing $Q_p = 46 \times 9.62 = 442.5 \text{ kips}$

Skin Friction $Q_s = 137.7 + 1.075(21 - 10.5) \times 10.996$
(See Pg. 2-17)
 $= 137.7 + 124.1$
 $= 261.8 \text{ kips}$

Ultimate Capacity $Q = 261.8 + 442.5 = 704.3 \text{ kips}$

Design Capacity $Q_d = 469.5 \text{ kips}$

(2) At Penetration 134.5' (=145'-10.5')

End Bearing $Q_p = 200 \times 9.62 = 1,924 \text{ kips}$

Skin Friction $Q_s = 1,523.6 + 2.0(30 - 10.5) \times 10.996$
(See Pg. 2-17)
 $= 1,523.6 + 423.5$
 $= 1,952.4 \text{ kips}$

Ultimate Capacity $Q = 1,952.4 + 1,924 = 3,876.4 \text{ kips}$

Design Capacity $Q_d = 2,584.3 \text{ kips}$

Dr. C. S. Brown, Owner: U. S. Navy Subject: Structural Concrete Pile
Date: 4-2-72 Job No.: 27-771-72 Calculation: Pile Pile Capacity

(iii) At Penetration 159.5 ft (=170' - 10.5')

End Bearing $Q_p = 100 \times 9.62 = 962 \text{ kips}$

Skin Friction $Q_s = 2,193.4 + 1.70 \times (25 - 10.5) \times 10.996$
(See p. 2.17)

$$= 2,193.4 + 271.1$$

$$= 2,464.5 \text{ kips}$$

Ultimate Capacity $Q_u = 2,464.5 + 962 = 3,426.5 \text{ kips}$

Design Capacity $Q_d = 2,277.7 \text{ kips}$

By C. S. Smith Client U.S.N.V. Subject Structural Capacity Analysis
 Date 4-28-72 Job No. 27-221-72 Calculation Pile Pile Capacity

2.4 PILE CAPACITY IN TENSION

$$Q = Q_s$$

where Q_s = skin friction on the wall of the pile

by John J. Orent Date 7/2/82 Subject Steel Pipe Jacket Design (Part 1)
 Date 7/2/82 Job No. 222 Calculation Spun Skin Capacity

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Tension ---

O.D. = 30"

$A_s = \pi D(\Delta L) = 7.334 (\Delta L)$ SQ. FT

Penetration Below Mudline (ft)	Unit Skin Friction (ksf)	Ave. Unit Skin Friction f_{as} (ksf)	Segment Length (ΔL) (FT)	Skin Friction in Segment (kip)	Total Skin Friction (kip)
0	0	0.165	20	23.9	0
20	0.33				23.9
20	0.29	0.375	15	44.2	
35	0.46				70.1
35	0.60	0.775	21	127.8	
56	0.95				197.9
56	0.80	0.950	23	171.6	
79	1.10				369.5
79	1.35	1.390	3	32.8	
82	1.43				402.3
82	2.00	1.715	25	336.7	
107	2.00				739.0
107	2.00	2.00	8	125.7	
115	2.00				864.7
115	2.00	2.00	30	471.2	
145	2.00				1,335.9
145	1.70	1.70	25	333.2	
170	1.70				1,669.7
170	1.48	1.60	35	439.8	
205	1.72				2,109.5
205	2.30	2.01	75	1,184.0	
280	2.30				3,293.5
280	2.30	2.35	20	369.1	
300	2.10				3,662.6
			$\Sigma = 200$ ft		

CREST OFFSHORE, INC.

Sheet 2 of 4

By C. J. [illegible] Client U. [illegible] Subject St. [illegible] 1 [illegible]
 Date 8/1/82 Job No. 2-771-82 Calculation By [illegible]

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Tension ---

O.D. = 36"

$A_s = \pi D (\Delta L) = 3.423 (\Delta L)$ sq. ft

Penetration Below Shell (ft)	Unit Skin Friction (ksf)	Ave. Unit Skin Friction f_{as} (ksf)	Segment Length (ΔL) (ft)	Sk. Friction in Segment (kips)	Total Sk. Friction (kips)
0	0				0
20	0.33	0.165	20	31.1	31.1
20	0.29	0.375	15	53.0	84.1
35	0.46				
35	0.60	0.775	21	153.4	237.5
56	0.95				
56	0.80	0.950	23	205.9	443.4
79	1.10				
79	1.35	1.390	3	39.3	482.7
82	1.43				
82	1.43	1.715	25	404.1	886.8
107	2.00				
107	2.00	2.00	8	150.8	1,037.6
115	2.00				
115	2.00	2.00	30	563.5	1,601.1
145	2.00				
145	1.70	1.70	25	400.6	2,001.7
170	1.70				
170	1.48	1.60	35	527.8	2,529.5
205	1.72				
205	1.72	2.01	75	1,420.8	3,950.3
280	2.30				
280	2.30	2.35	20	443.0	4,393.3
300	2.40				
			$\Sigma = 200$ ft		

CREST OFFSHORE, INC.

Sheet 2 of 4

By D. J. Jones Client U.S. 1400 Subject State of Georgia, 1913-2012
Date 1/1/13 Job No. 17-111-13 Calculation 100% Capital Charge

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Tension ---

O.D. = 39"

$$A_5 = \pi D(\Delta L) = 10.21(\Delta L) \text{ sq. FT}$$

Penetration (Ballist) Modulus (ft.)	Unit Skin Friction (ksf)	Avg. Unit Skin Friction f _{as} (ksf)	Segment Length (ΔL) (Ft)	Skin Friction in Segment (kips)	Total Skin Friction (kips)
0	0	0.165	20	33.7	0
20	0.33	0.375	20	57.4	33.7
35	0.29	0.775	15	57.4	91.1
35	0.46	0.775	21	166.2	257.3
56	0.60	0.950	23	223.1	480.4
56	1.10	1.390	3	42.6	523.0
79	1.35	1.715	25	437.8	960.8
79	1.43	2.00	8	163.4	1,124.2
82	2.00	2.00	30	612.6	1,736.8
107	2.00	1.70	25	433.9	2,170.7
107	2.00	1.60	35	571.8	2,742.5
115	2.00	2.01	75	1,539.2	4,281.7
145	2.30	2.35	20	479.9	4,761.6
145	1.70				
170	1.70				
170	1.48				
205	1.72				
205	1.72				
280	2.30				
280	2.30				
300	2.40				
			Σ = 200 ft		

CREST OFFSHORE, INC.

Sheet 2 of 4

By C. S. S. S. Date 4/1/77 Sub. No. 15 Job No. 27771 Calculation 15

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Tension ---

O.D. = 42"

$A_s = \pi D (\Delta L) = 12.976 (\Delta L)$ sq. ft

Penetration Below Mudline (ft)	Unit Skin Friction (ksf)	Ave. Unit Skin Friction f_{as} (ksf)	Segment Length (ΔL) (ft)	Skin Friction in Segment (kips)	Total Skin Friction (kips)
0	0				0
20	0.33	0.165	20	36.3	36.3
20	0.29	0.375	15	61.9	98.2
35	0.46				
35	0.60	0.775	21	179.0	277.2
56	0.95				
56	0.80	0.950	23	240.3	517.5
79	1.10				
79	1.35	1.390	3	45.9	563.4
82	1.43				
107	2.00	1.715	25	471.5	1,034.9
107	2.00	2.00	8	175.9	1,210.8
115	2.00				
145	2.00	2.00	30	659.8	1,870.6
145	1.70	1.70	25	467.3	2,337.9
170	1.70				
205	1.48	1.60	35	615.3	2,953.7
205	1.72				
220	2.20	2.01	75	1,637.6	4,591.3
280	2.20				
300	2.35	2.35	20	516.3	5,107.6
			$\Sigma = 300$		

CREST OFFSHORE, INC.

Sheet 206 of 21

By: J. L. Smith Check: J. L. Smith Subject: Offshore Concrete Foundation
 Date: 1-1-77 Job No: 21-11-32 Calculation: Pile Cap Design

Ultimate Pile Capacity (Q_u) --- Tension

Penetration Below Lvl. (Ft.)	30"Ø Q (KIPS)	36"Ø Q (KIPS)	39"Ø Q (KIPS)	42"Ø Q (KIPS)
0	0	0	0	0
20	23.9	31.1	33.7	36.3
35	70.1	84.1	91.1	98.2
56	197.9	237.3	257.3	277.2
79	369.3	443.4	480.4	517.5
82	403.3	482.7	523.0	563.4
107	733.0	886.8	960.8	1,034.9
115	864.7	1,037.6	1,124.2	1,210.8
145	1,335.9	1,603.1	1,736.8	1,870.6
170	1,662.7	2,003.7	2,170.7	2,337.9
205	2,109.5	2,531.5	2,742.9	2,953.7
250	3,093.5	3,832.3	4,231.7	4,611.3
300	3,662.5	4,395.3	4,761.6	5,128.1

CREST OFFSHORE, INC.

Sheet 24 of 41

Client U.S. Navy Subject Structural Connection
 Date 1-1-66 Job No. 22-77-1-17 Calculation Pipe pile Capacity Curves

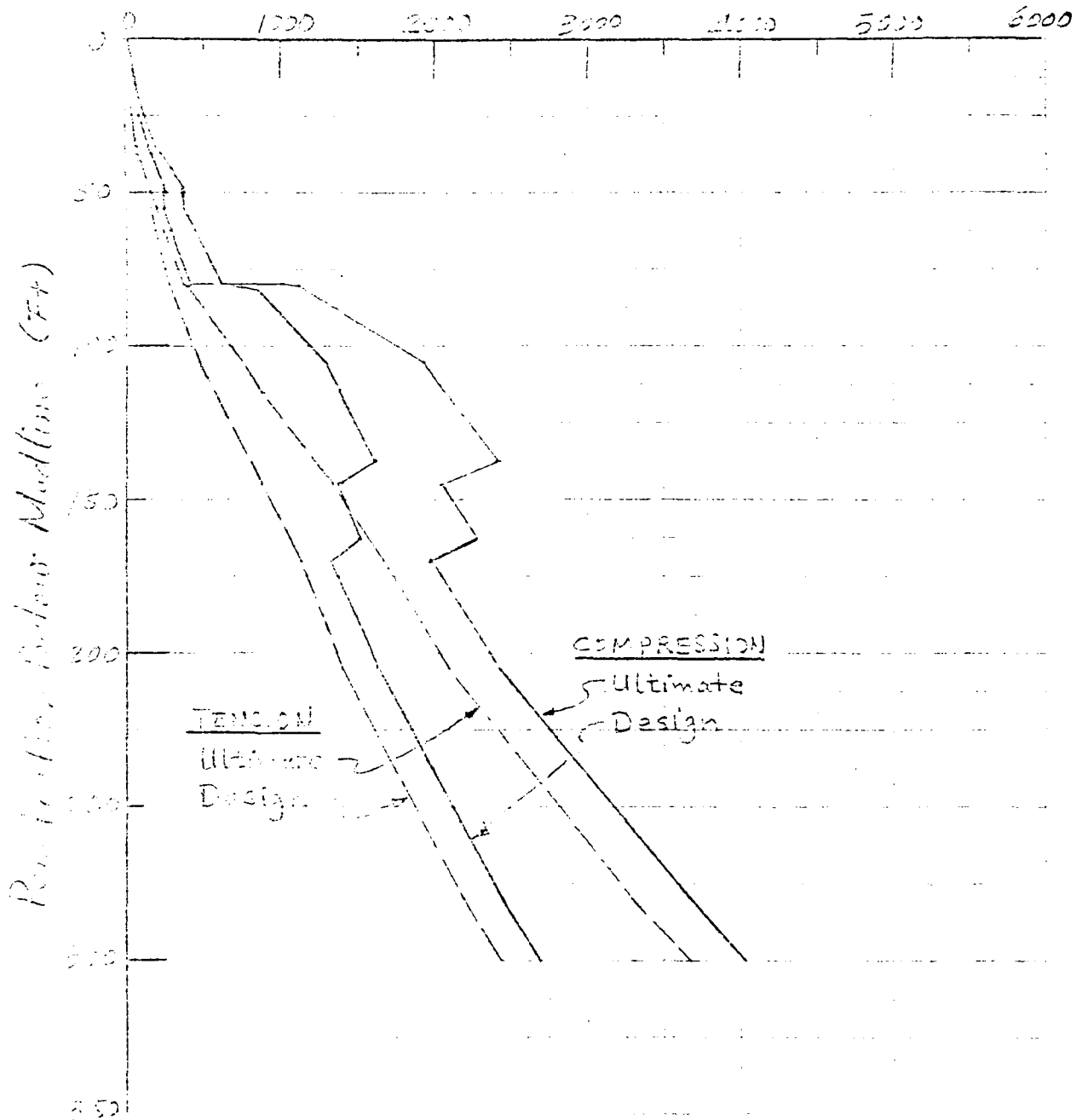
Design Pile Capacity ($Q_d = Q/F.S.$) --- Tension

F.S. = 1.5

Penetration Extrapolated (Ft)	30" Q_d (KIPS)	36" Q_d (KIPS)	39" Q_d (KIPS)	42" Q_d (KIPS)
0	0	0	0	0
20	17.3	20.7	22.5	24.2
30	43.7	56.1	60.7	65.5
36	131.9	153.3	171.5	184.8
56	246.3	298.6	320.5	343.0
79	268.2	321.2	348.7	373.6
82	422.7	591.2	640.5	689.9
107	576.9	691.7	742.5	807.2
115	820.6	1,062.7	1,157.9	1,247.1
143	1,113.1	1,335.2	1,447.1	1,558.6
170	1,406.3	1,627.7	1,823.3	1,969.1
205	2,198.7	2,634.3	2,854.5	3,074.2
280	3,441.7	2,930.2	3,174.4	3,418.7

By C. C. 112 Date U.S. M.I.D. Subject Structural Capacity Analysis
 Date 4-1-78 Job No. 2105.1-92 Calculation Pile Pile Capacity Curves

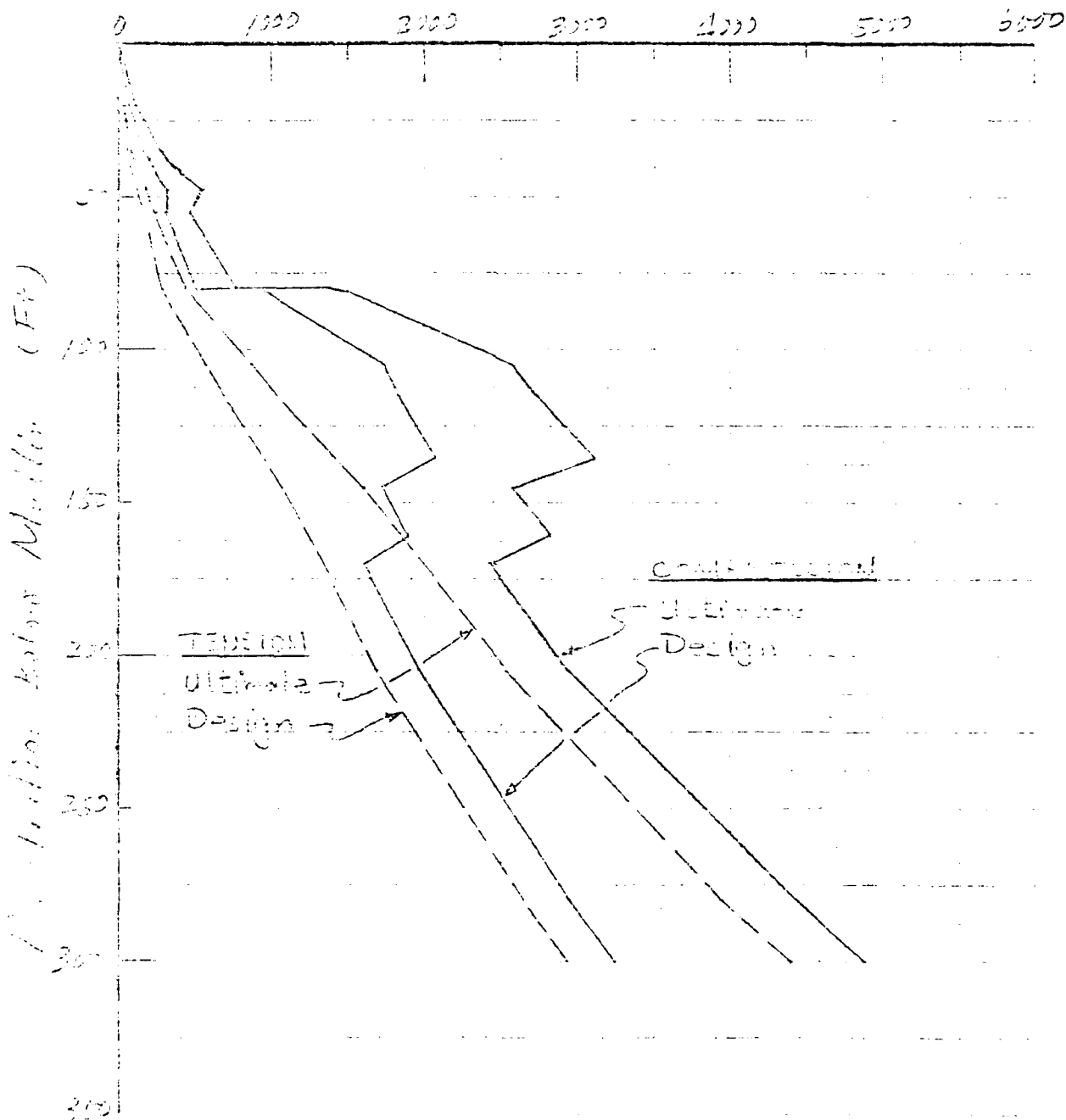
Pile Capacity (Kips)



30-in. Diameter Pipe Piles

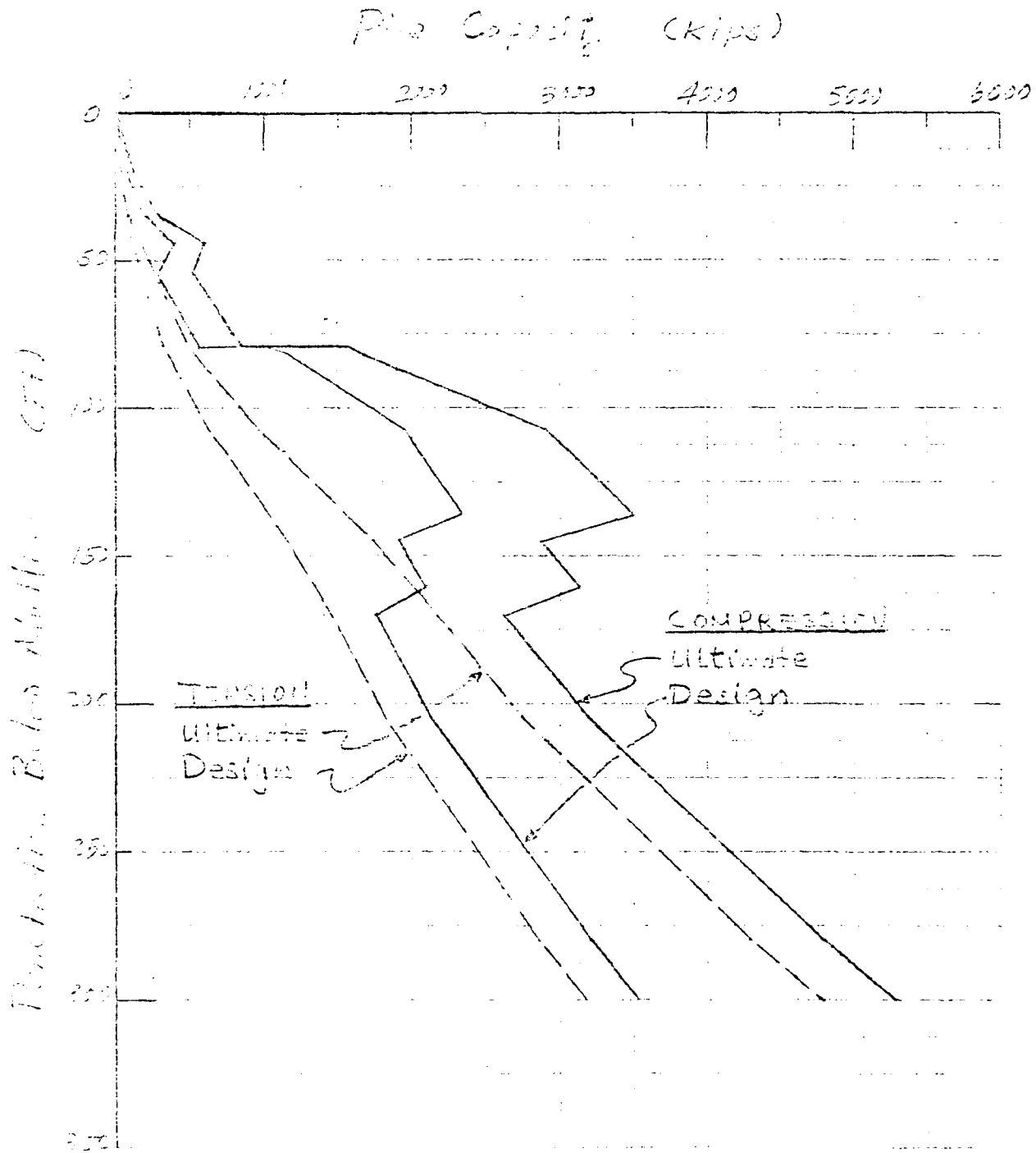
by C. C. Chen Client U.S. Navy Subject Structural Concept Development
 Date 4-1-78 Job No. 22-721-91 Calculation Pile Capacity

Pile Capacity (kips)



36-in. Diameter Pipe Piles

By W. J. H. H. Client U.S. NAVY Subject Structural Capacity Analysis
 Date 12-7-71 Job No. 27-71-92 Calculation Pile Capacity Curves



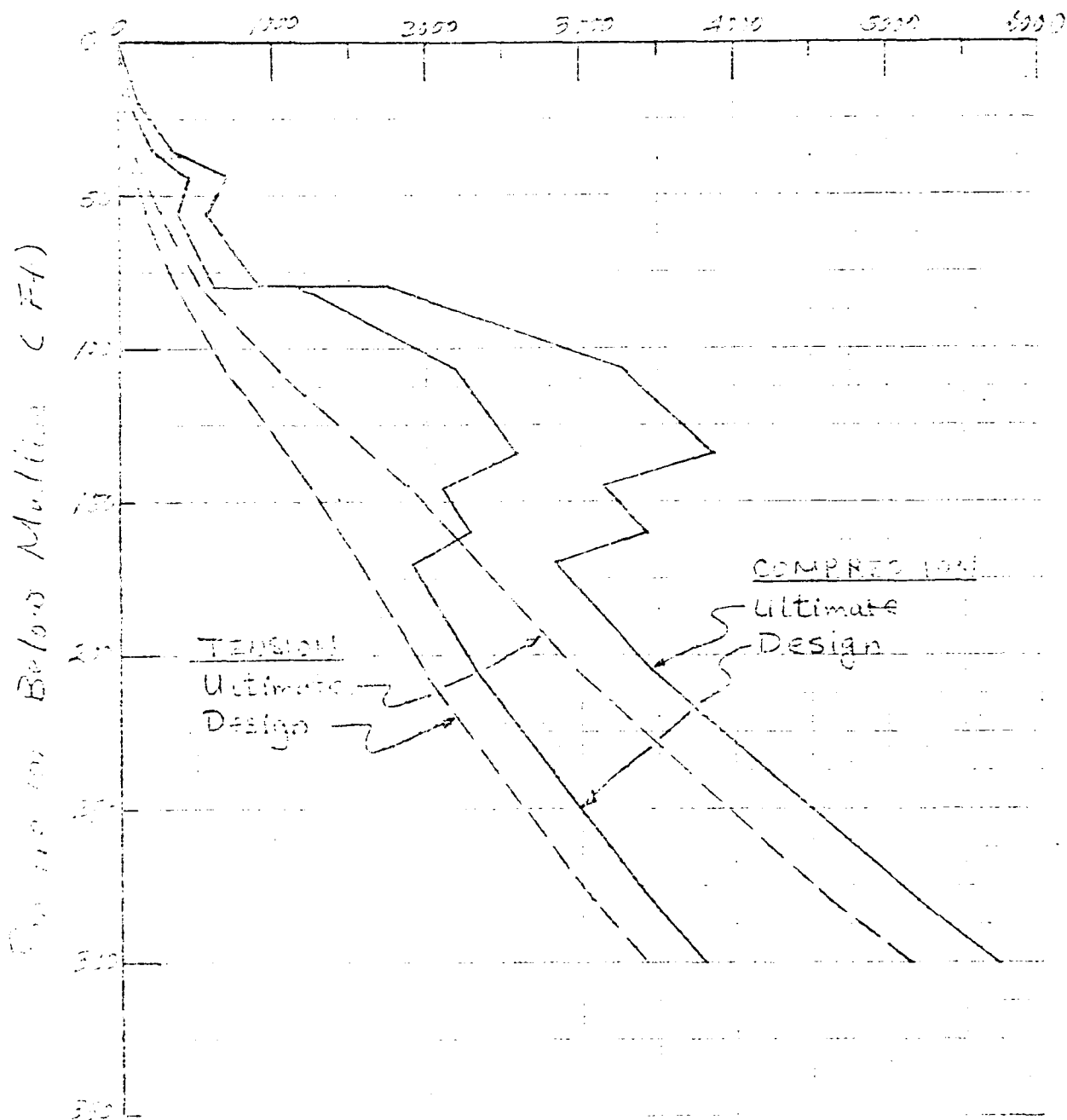
39-in. Diameter Pipe Piles

CREST OFFSHORE, INC.

Sheet 2 of 4 - 4.1

Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-1-73 Job No. 22-271-72 Calculation Pile Capacity Curves

Pile Capacity (kips)



42-in Diameter Pipe Piles

SECTION 3

PILE DRIVING RESISTANCE CURVES

3.1 INTRODUCTION

Driving resistance curves are developed using the stress wave approach as presented in the McClelland Report. It should be noted that these curves are empirical and approximate and in no way assume attainment of the desired penetration.

By C. Cheer Client U.S. NAVY Subject Structural Concept Analysis (3-212)
Date 4-22-76 Job No. 27-271-72 Calculation Pile Driving Resistance Curve

3-2 30-IN. DIAMETER PIPE PILES

Estimated Driving Resistance

= 50% Skin Friction in Clay

100% Skin Friction in Sand

No End Bearing

CREST OFFSHORE, INC.

Sheet 5.03 of 25

By C. Chern Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-14-76 Job No. 27-771-92 Calculation Pile Driving Resistance Curves

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Compression ---

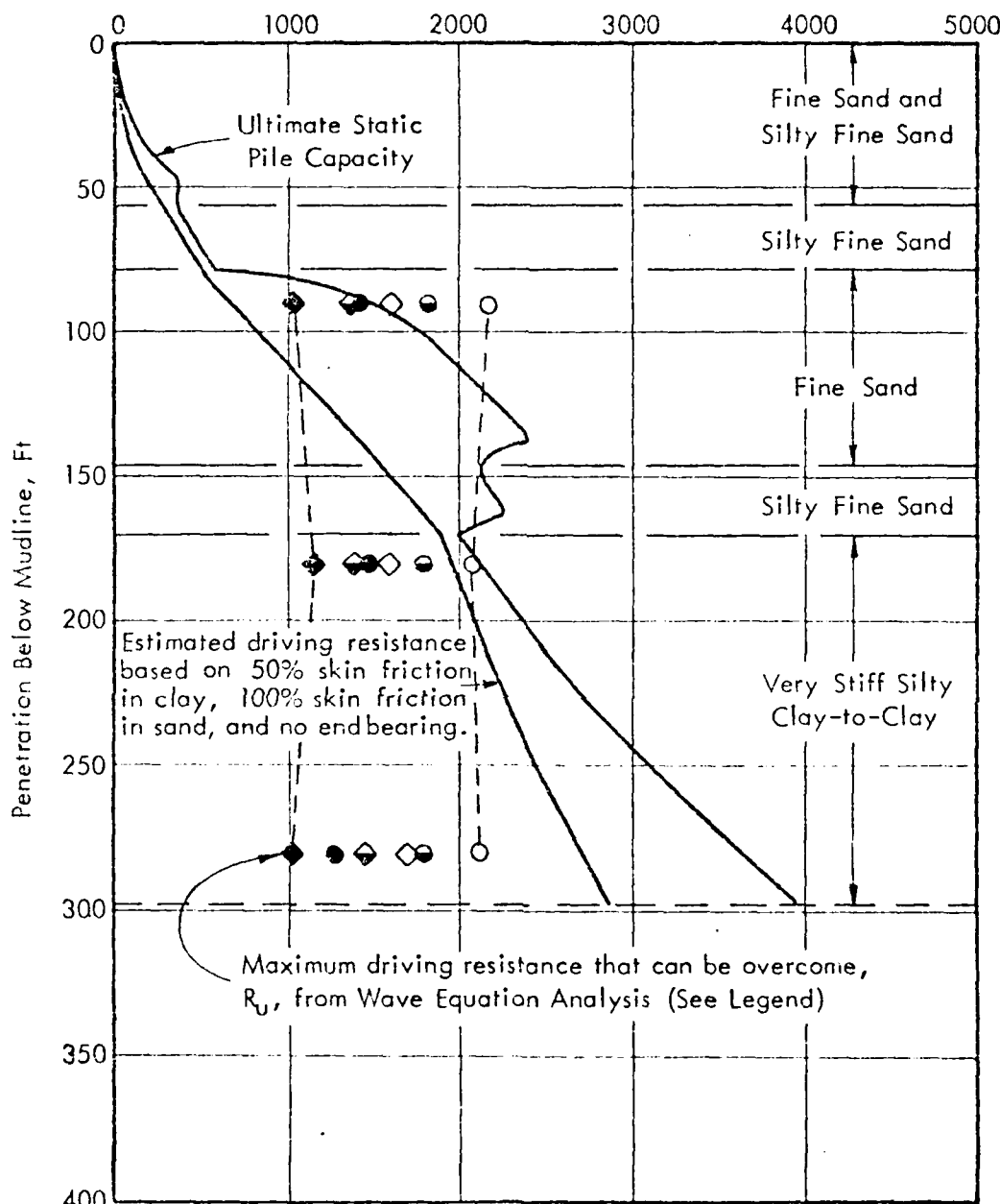
O.D. = 30"

$A_s = \pi D (\Delta L) = 7.854 (\Delta L)$ sq ft

Penetration Below Mudline (ft)	Unit Skin Friction (ksf)	Aver. Unit Skin Friction f_s (ksf)	Segment Length (ΔL) (ft)	Skin Friction in Segment (kips)	Total Skin Friction (kips)
0	0				0
20	0.45	0.225	20	35.3	35.3
20	0.40				
35	0.67	0.535	15	63.0	98.3
35	0.85				
56	1.30	1.075	21	177.3	275.6
56	1.10				
79	1.65	1.375	23	248.4	524.2
79	1.30				
82	2.00	1.950	3	45.9	570.1
82	2.00				
107	2.00	2.00	25	392.7	962.8
107	2.00				
115	2.00	2.00	8	125.7	1088.5
115	2.00				
145	2.00	2.00	30	471.2	1559.7
145	1.70				
170	1.70	1.70	25	333.8	1893.5
170	1.48				
205	1.72	1.60	35	213.9 *	2113.4
205	1.72			439.9	2553.3
280	2.30	2.01	75	592.0 +	2705.4
280	2.30			1129.9	3835.3
300	2.40	2.35	20	154.5 +	2889.9
				269.1	3159.0
			$\Sigma = 300$ ft		
* 50% SKIN FRICTION IN CLAY					

By C. J. ... Client U.S. NAVY Subject Structural Concept for ...
 Date 4-14-76 Job No. 27-171-92 Calculation Pile Driving Resistance Curves

Ultimate Static Pile Capacity, Kips
 Estimated Driving Resistance, Kips



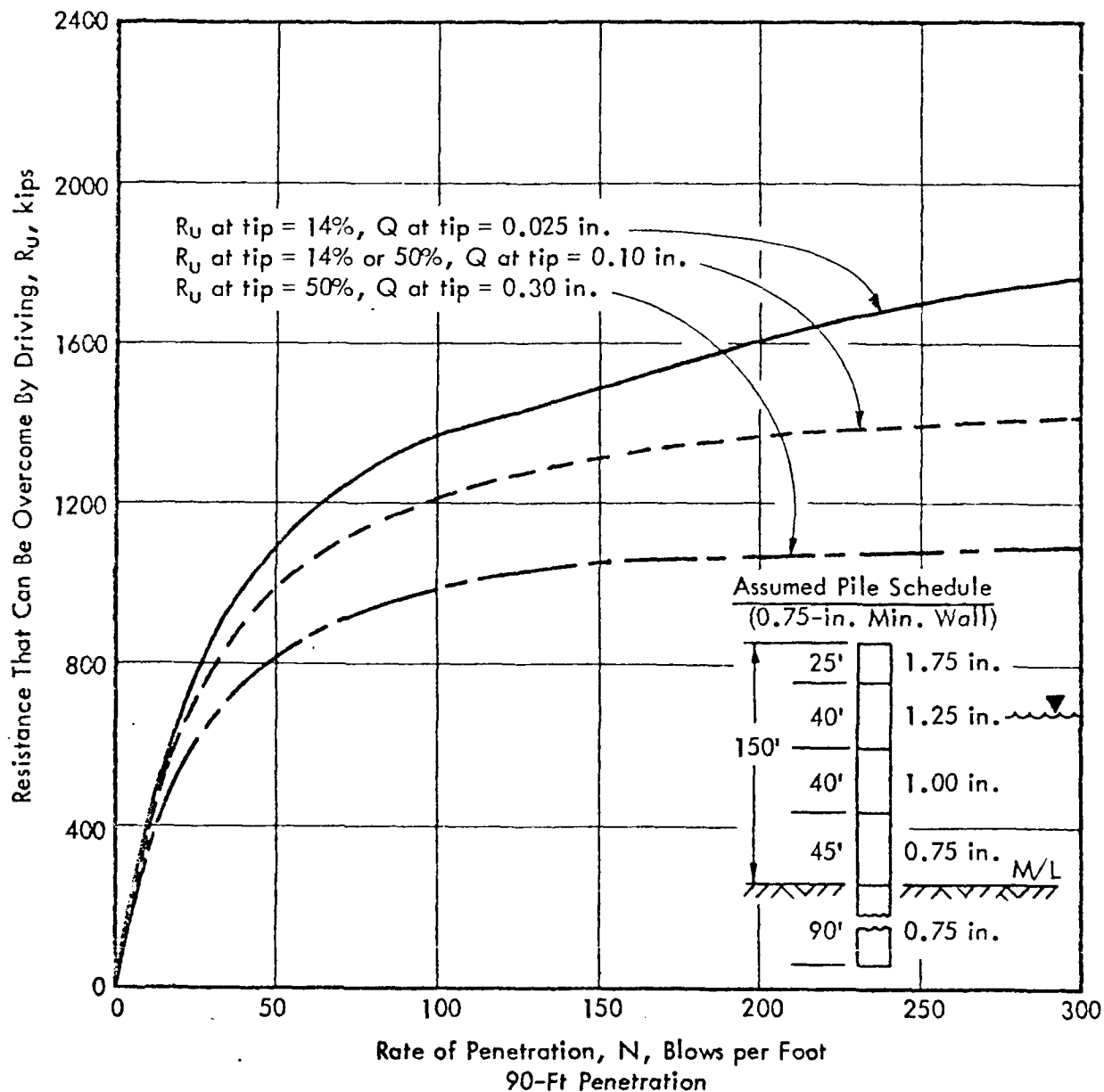
Boring 1

LEGEND					
Symbol		R_u at tip, %, for pile penetration of			Q at tip, inches
0.75-in. Min. Wall	1.25-in. Min. Wall	90'	180'	280'	
◆	●	50	50	2	0.3
◇	◐	50 or 14	35 or 6	2	0.1
◊	○	14	14	2	0.025

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Sheet 3.05 of 21

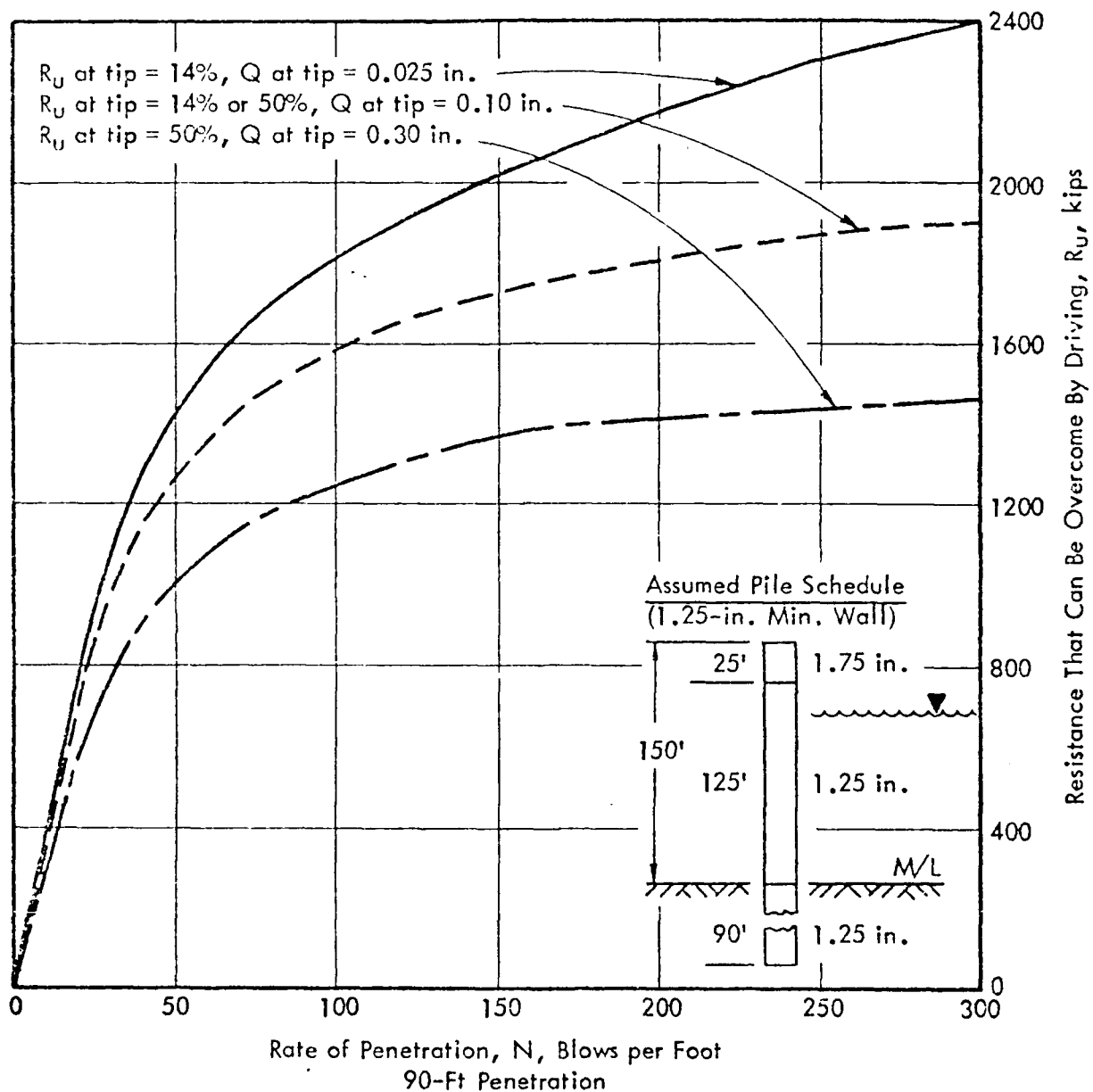
By C. Chern Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-14-76 Job No. 27-771-72 Calculation Pile Driving Resistance Curves



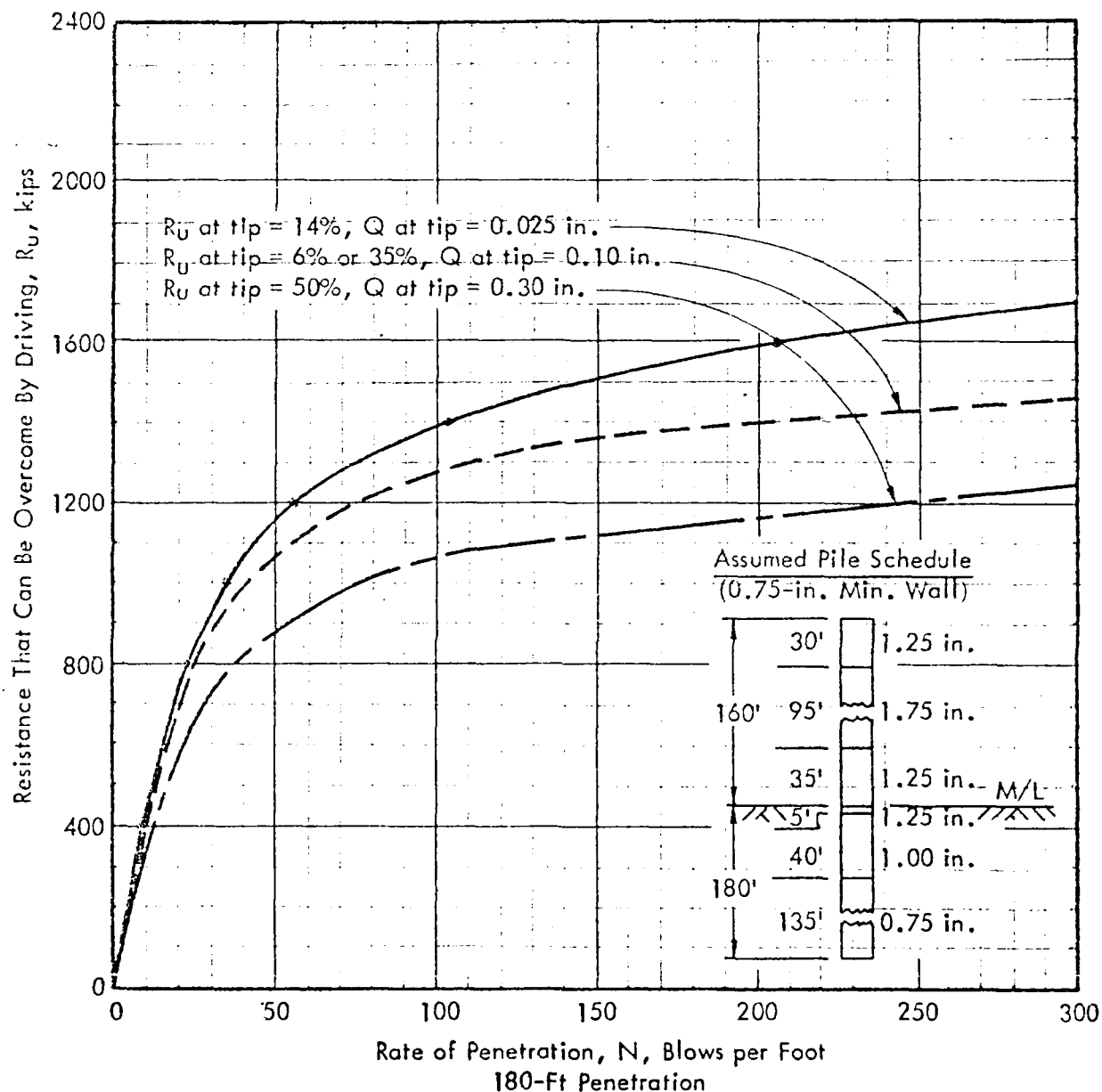
Vulcan 040 Hammer
 Wt. of Ram = 40,000 lbs
 Rated Energy = 120,000 ft-lbs
 Hammer Efficiency = 0.75
 Wt. of Pile Cap = 27,800 lbs

% R_u at tip - See Above
 Spring Constant = 2.78×10^6 lbs/in.
 Damping Factor, side & tip, $J = 0.15$
 Quake Factor, side, $Q = 0.10$ in.
 Quake Factor, tip, - See Above

By C. Chern Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-15-76 Job No. 27-771-92 Calculation Pile Driving Resistance Curves



By C. Chern Client U.S. Navy Subject Structural Concept Analysis
 Date 11-96 Job No. 27-771-91 Calculation Pile Driving Resistance

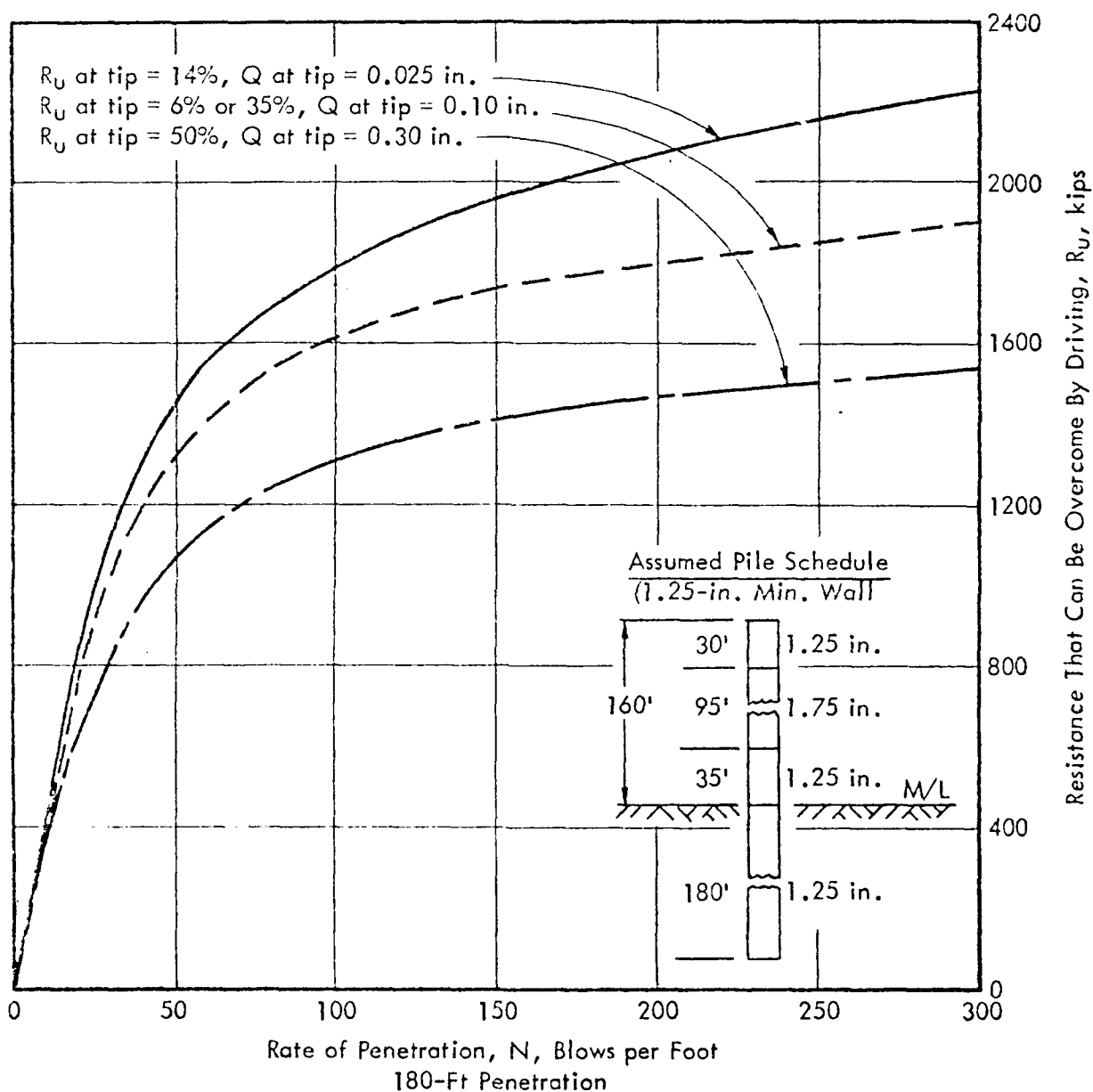


Vulcan 040 Hammer	% R_u at tip - See Above
Wt. of Ram = 40,000 lbs	Spring Constant = 2.78×10^6 lbs/in.
Rated Energy = 120,000 ft-lbs	Damping Factor, side & tip, $J = 0.15$
Hammer Efficiency = 0.75	Quake Factor, side, $Q = 0.10$ in.
Wt. of Pile Cap = 27,800 lbs	Quake Factor, tip, - See Above

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Sheet 3.25 of 22

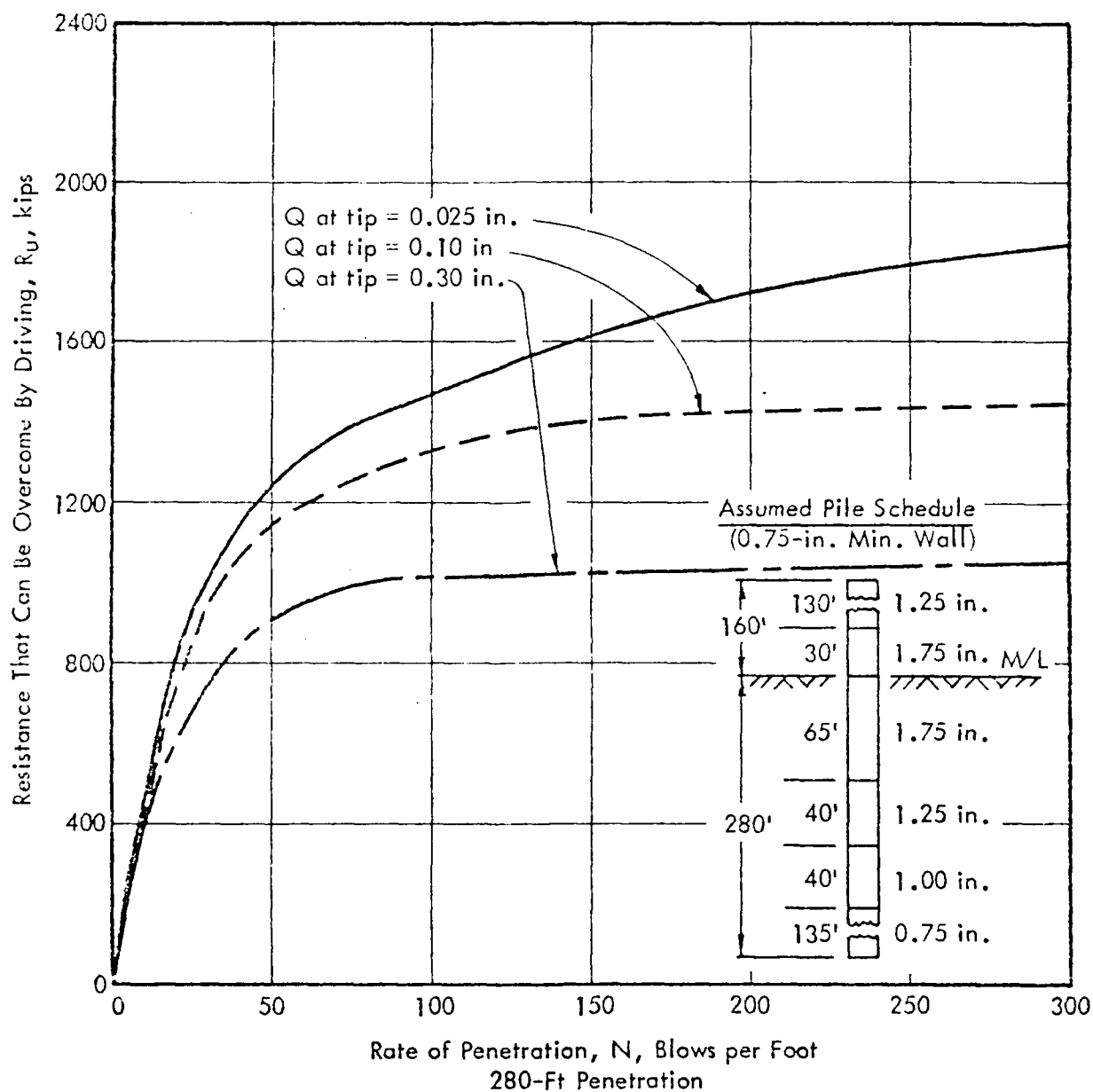
By C. Chera Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-11-76 Job No. 27-771-92 Calculation Pile Driving Resistance



CREST OFFSHORE, INC.

Sheet 3.02 of 23

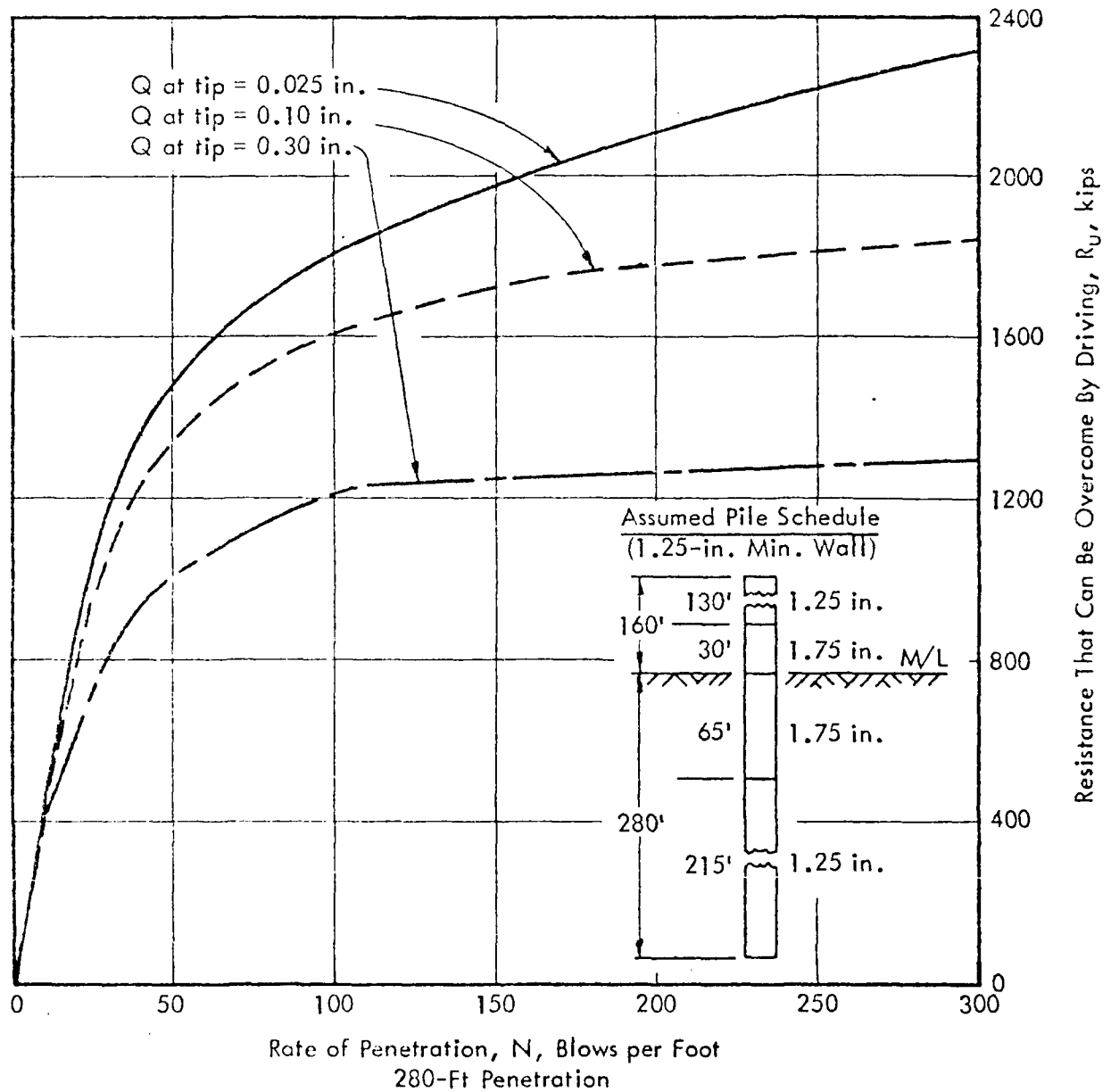
By C. Chern Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-18-76 Job No. 27-771-92 Calculation Pile Driving Resistance Curves



Vulcan 040 Hammer
 Wt. of Ram = 40,000 lbs
 Rated Energy = 120,000 ft-lbs
 Hammer Efficiency = 0.75
 Wt. of Pile Cap = 27,800 lbs

% R_u at tip = 2%
 Spring Constant = 2.78×10^6 lbs/in.
 Damping Factor, side & tip, $J = 0.15$
 Quake Factor, side, $Q = 0.10$ in.
 Quake Factor, tip, - See Above

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-14-76 Job No. 27-771-92 Calculation Pile Driving Resistance Curves



By, C. Chern Client U.S. NAVY Subject Structural Concept Analysis
Date 4-24-76 Job No. 27-771-95 Calculation By Dr. Robert L. Hume, C.E.

3.3 36-IN. DIAMETER PIPE PILES

The data and the "STRESS WAVE ANALYSIS PROGRAM" printouts used to plot the pile driving resistance curves set forth in this section were compiled in APPENDIX A.2

CREST OFFSHORE, INC.

Sheet 3-12 of 13

By C. Chern Client U.S. NAVY Subject Structural Concepts Analysis
 Date 4-14-76 Job No. 27-771-22 Calculation Pile Driving Resistance

Skin Friction Capacity ($Q_s = f_{as} A_s$)

--- Compression ---

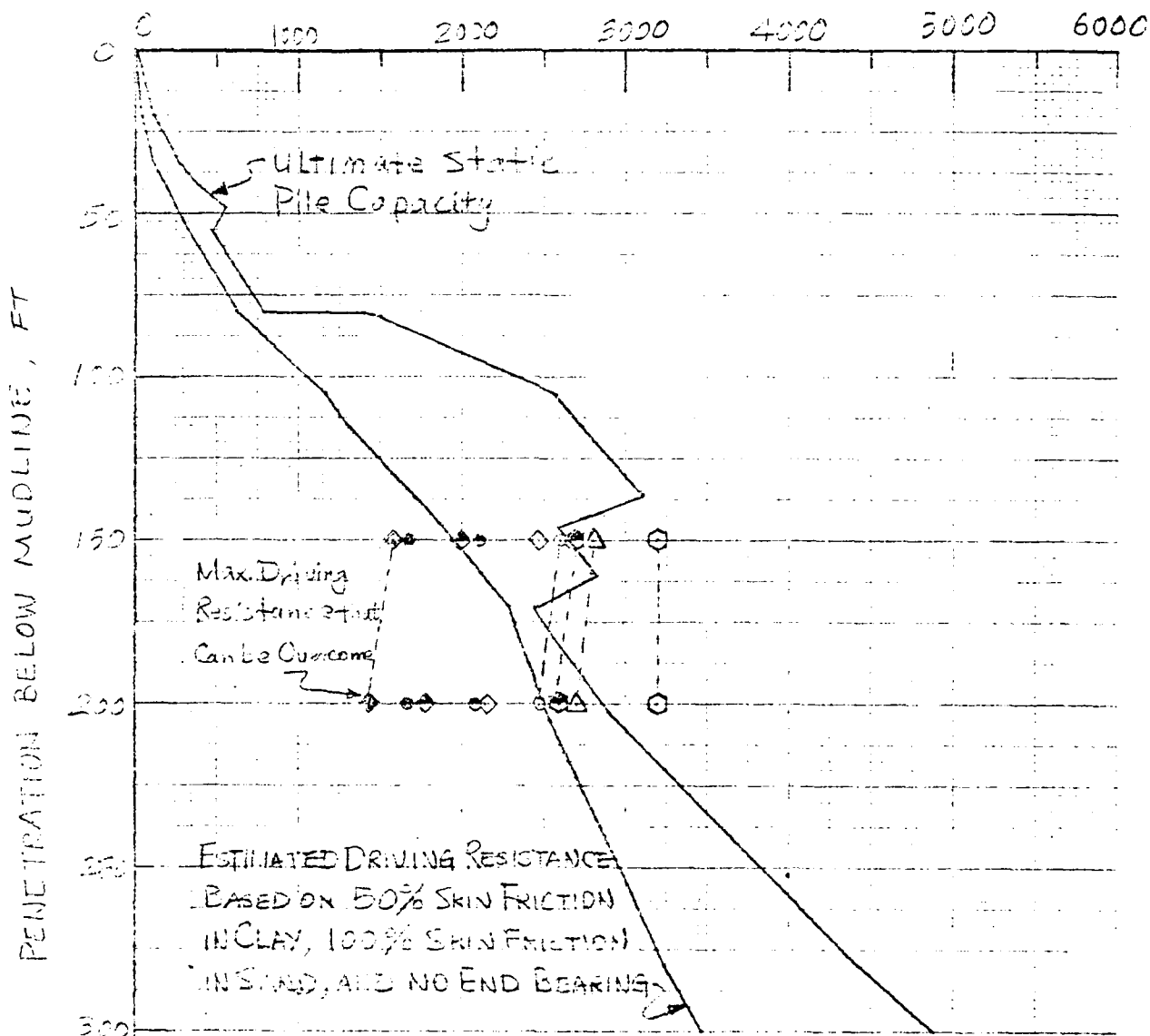
O.D. = 26"

$A_s = \pi D (L) = 4.428(L)$ sq. ft

Penetration Below 10 min (ft)	Unit Skin Friction (psf)	Av. Unit Skin Friction f_{as} (psf)	Segment Length (ΔL) (ft)	Skin Friction in Segment (kips)	Total (Skin Friction) (kips)
0	0	0.225	20	42.4	0
20	0.45				42.4
20	0.40	0.535	15	76.6	118.0
35	0.67				
35	0.85	1.075	21	212.8	330.8
56	1.30				
56	1.10	1.375	23	298.1	628.9
79	1.65				
79	1.20	1.950	3	55.1	684.0
82	2.00				
82	2.00	2.00	2.5	471.3	1155.3
107	2.00				
107	2.00	2.00	8	150.8	1306.1
115	2.00				
115	2.00	2.00	30	565.5	1871.6
145	1.70				
145	1.70	1.70	25	400.6	2272.2
170	1.45				
170	1.45	1.60	35	263.2*	2536.1
205	1.72				
205	1.72	2.01	75	710.4*	3246.5
280	2.30				
280	2.30	2.35	20	221.5*	3468.0
300	2.40				
			$L = 200$ ft		
26" O.D. SKIN FRICTION IN CLAY					

by C. Chern Client U.S. Navy Subject Structural Concept Analysis
 Date 4-14-76 Job No. 27-77-92 Calculation Pile Driving Resistance

ULTIMATE STATIC PILE CAPACITY, KIPS
 ESTIMATED DRIVING RESISTANCE, KIPS

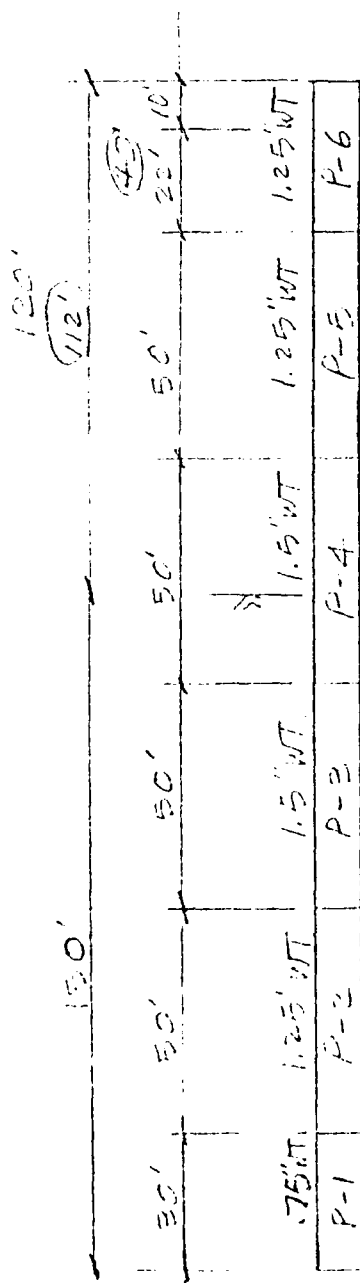


SYMBOL			R _u at Pile Tip, % Penetration		Q _u at Pile Tip, in.	Hammer
7.5" WT Min.	1.25" WT Min.	1.5" WT Min.	150'	200'		
●	●		50	50	.3	Vulcan
●	●		35	35	.1	040
○	○	△	14	14	.025	
		●	35	35	.1	Vulcan
		○	14	14	.025	060

36-IN. DIAMETER PIPE PILES

By C. C. Carr Client U.S. NAVY Subject Foundation Concept Analysis
 Date 5-12-56 Job No. 27-771-9 Calculation Foundation Concept Analysis

Assumed Pile Schedule -- 150 FT PENETRATION
 .75" WALL THK. MIN.



Vulcan 040 Hammer
 Wt. of Ram = 40,000 lbs
 Rated Energy = 120,000 ft-lbs
 Hammer Efficiency = 0.75
 Wt. of Pile Cap = 27,800 lbs

R_u at tip = 14%, Q at tip = 0.025 in.
 R_u at tip = 6% or 35%, Q at tip = 0.10 in.
 R_u at tip = 50%, Q at tip = 0.30 in.

Spring Constant = 2.78×10^6 lbs/in.
 Damping Factor, side & tip, $J = 0.15$
 Quake Factor, side, $Q = 0.10$ in.
 Quake Factor, tip, - See Above

CREST OFFSHORE, INC.

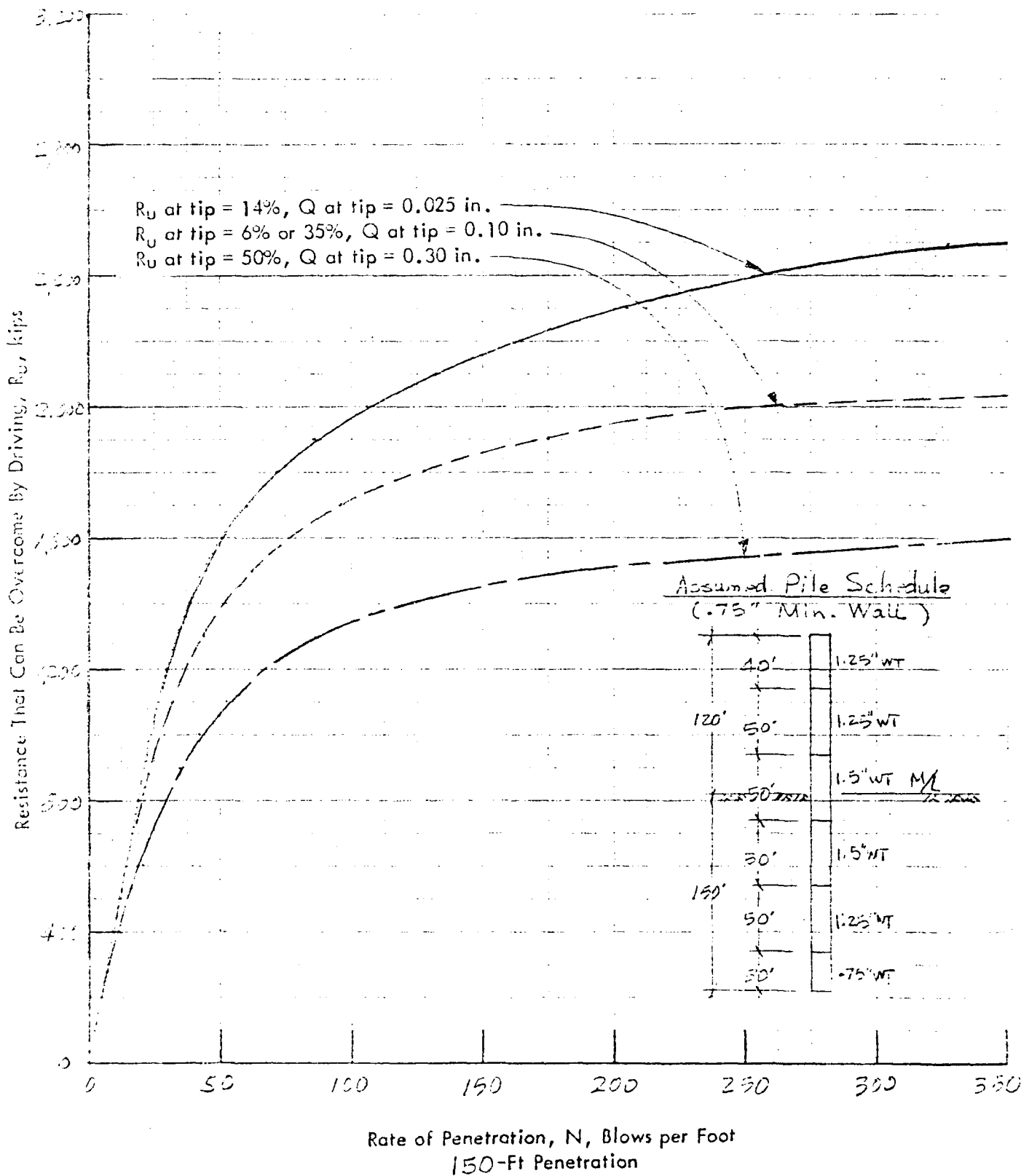
Sheet 3 of 5

By C. Chern Client U.S. NAVY

Subject Structural Concept Analysis

Date 4-12-75 Job No. 27-771 92

Calculation Pile Driving Resistance

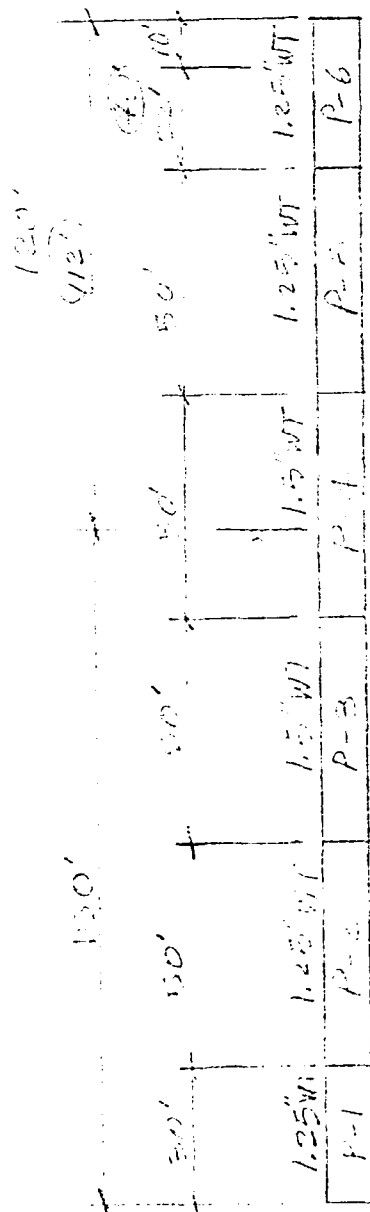


CREST OFFSHORE, INC.

Sheet 3 of 25

By C. Chern Client U.S. NAVY Subject Shallow Water Foundation
Date 4-19-76 Job No. 27-771-22 Calculation Pile Driving Results - CREST

Assumed Pile Schedule -- 150 FT PENETRATION
1.25" WALL THK. MIN.



Vulcan 040 Hammer
Wt. of Ram = 40,000 lbs
Rated Energy = 120,000 ft-lbs
Hammer Efficiency = 0.75
Wt. of Pile Cap = 27,800 lbs

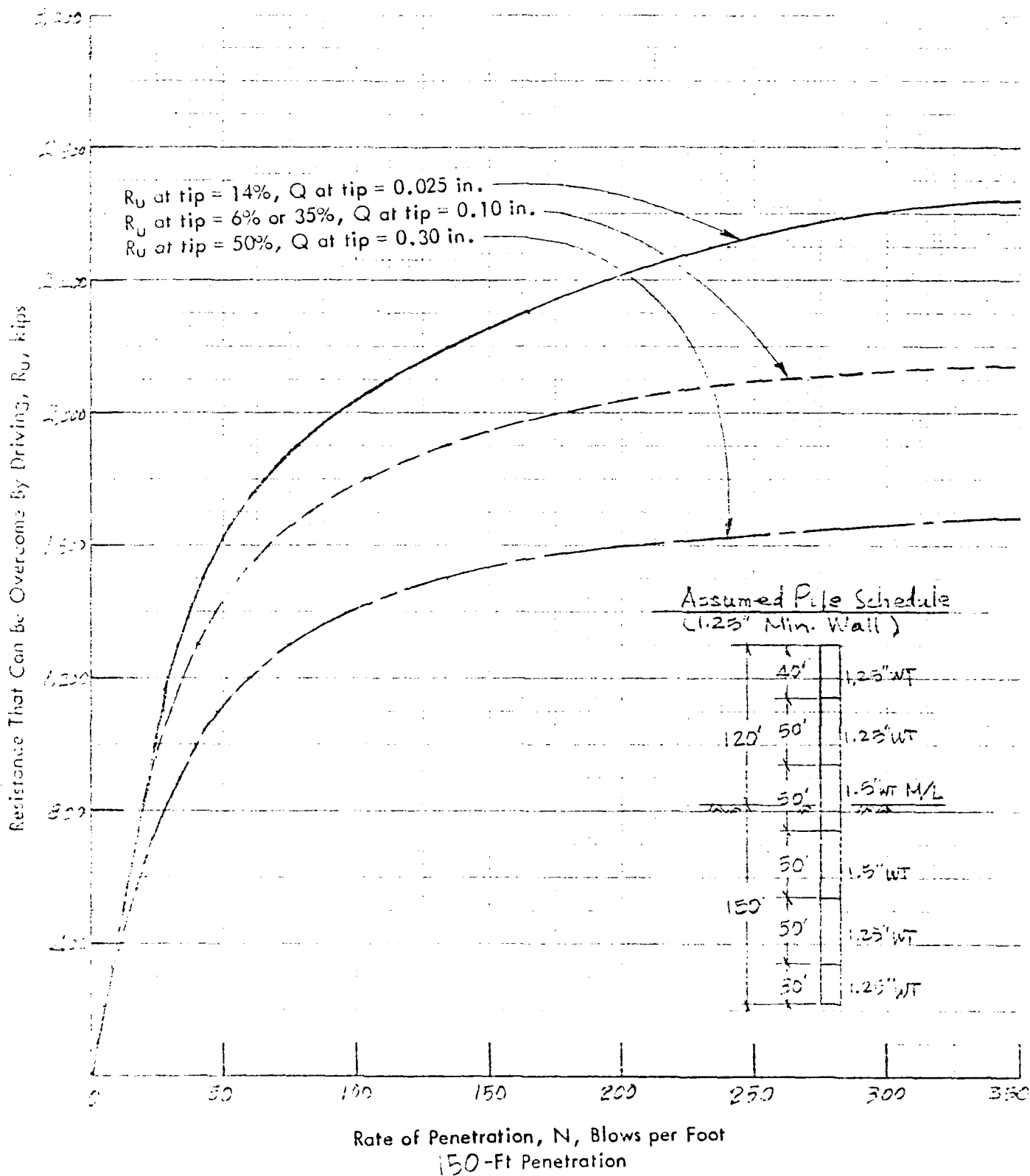
R_u at tip = 14%, Q at tip = 0.025 in.
 R_u at tip = 6% or 35%, Q at tip = 0.10 in.
 R_u at tip = 50%, Q at tip = 0.30 in.

Spring Constant = 2.78×10^6 lbs/in.
Damping Factor, side & tip, $J = 0.15$
Quake Factor, side, $Q = 0.10$ in.
Quake Factor, tip, - See Above

CREST OFFSHORE, INC.

Sheet 1 of 22

By C. Chou Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-20-66 Job No. 27-171-92 Calculation Pile Driving Analysis



CREST OFFSHORE, INC.

Sheet 34E of 35

By C. Chern Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-19-76 Job No. 27-771-12 Calculation Pile Driving Resistance Curves

Assumed Pile Schedule -- 200 FT PENETRATION
 .75" WALL THK. MIN.

200'	50'	50'	50'	50'	40'
.75" WT	1.25" WT	1.5" WT	1.5" WT	1.25" WT	1.25" WT
P-1	P-2	P-3	P-4	P-5	P-6

11.11.76
15.11.76

Vulcan 040 Hammer
 Wt. of Ram = 40,000 lbs
 Rated Energy = 120,000 ft-lbs
 Hammer Efficiency = 0.75
 Wt. of Pile Cap = 27,800 lbs

Spring Constant = 2.78×10^6 lbs/in.
 Damping Factor, side & tip, J = 0.15
 Quake Factor, side, Q = 0.10 in.
 Quake Factor, tip, - See Above

CREST OFFSHORE, INC.

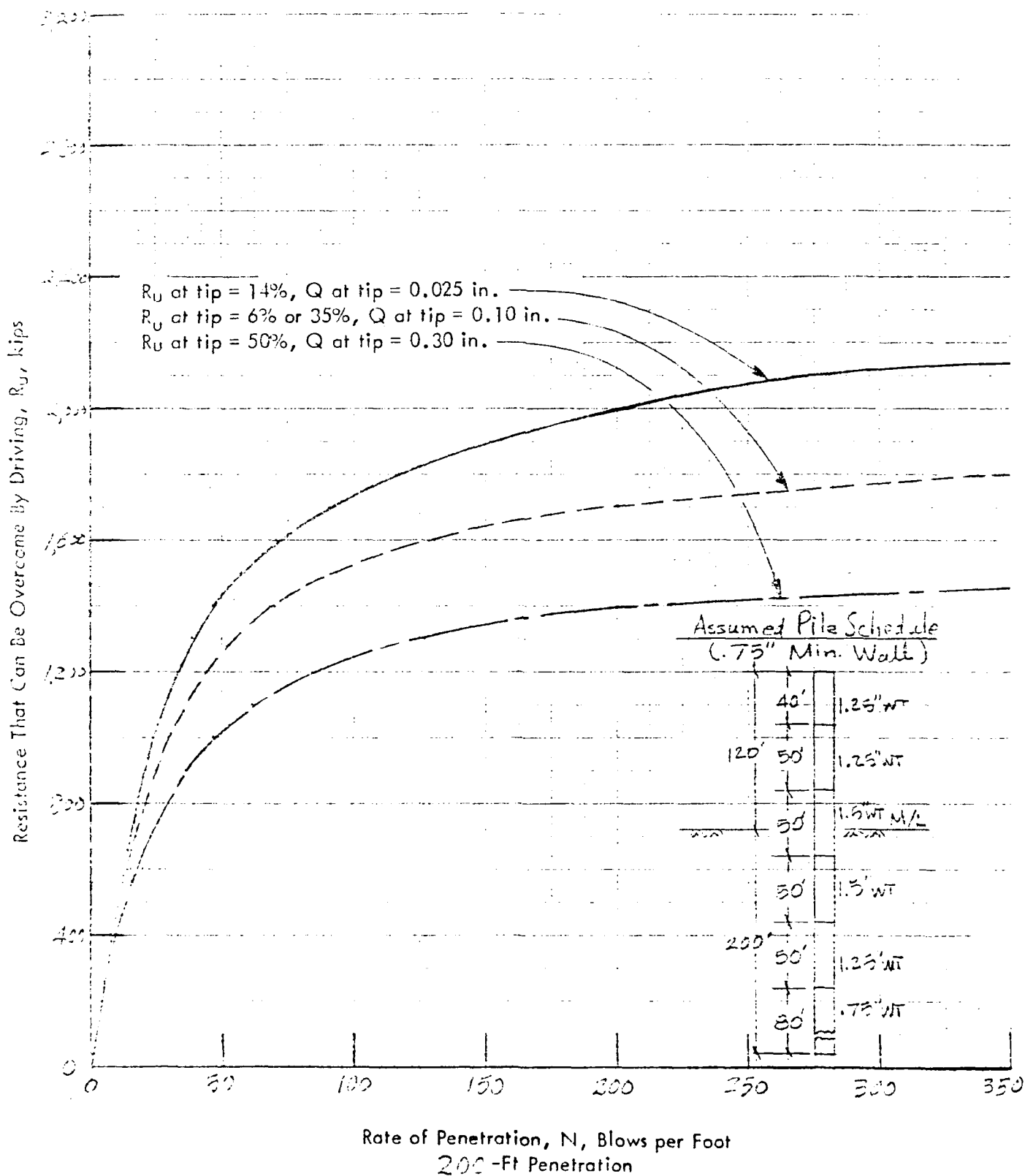
Sheet 2-19 of 25

By C. C. [unclear] Client U.S. NAVY

Subject *Structural Concept Analysis*

Date 4-22-75 Job No. 27-721-22

Calculation *200-Ft Penetration*



By C. Chern Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-12-76 Job No. 27-771-92 Calculation Pile Driving Resistance

Assumed Pile Schedule -- 200 FT PENETRATION
 1.25" WALL THK. MIN.

200'	120'	1.25" WT	P-1
50'	50'	1.25" WT	P-2
50'	50'	1.50" WT	P-3
50'	50'	1.50" WT	P-4
50'	50'	1.25" WT	P-5
40'	40'	1.25" WT	P-6

Mudline
 15' 10" 0.00

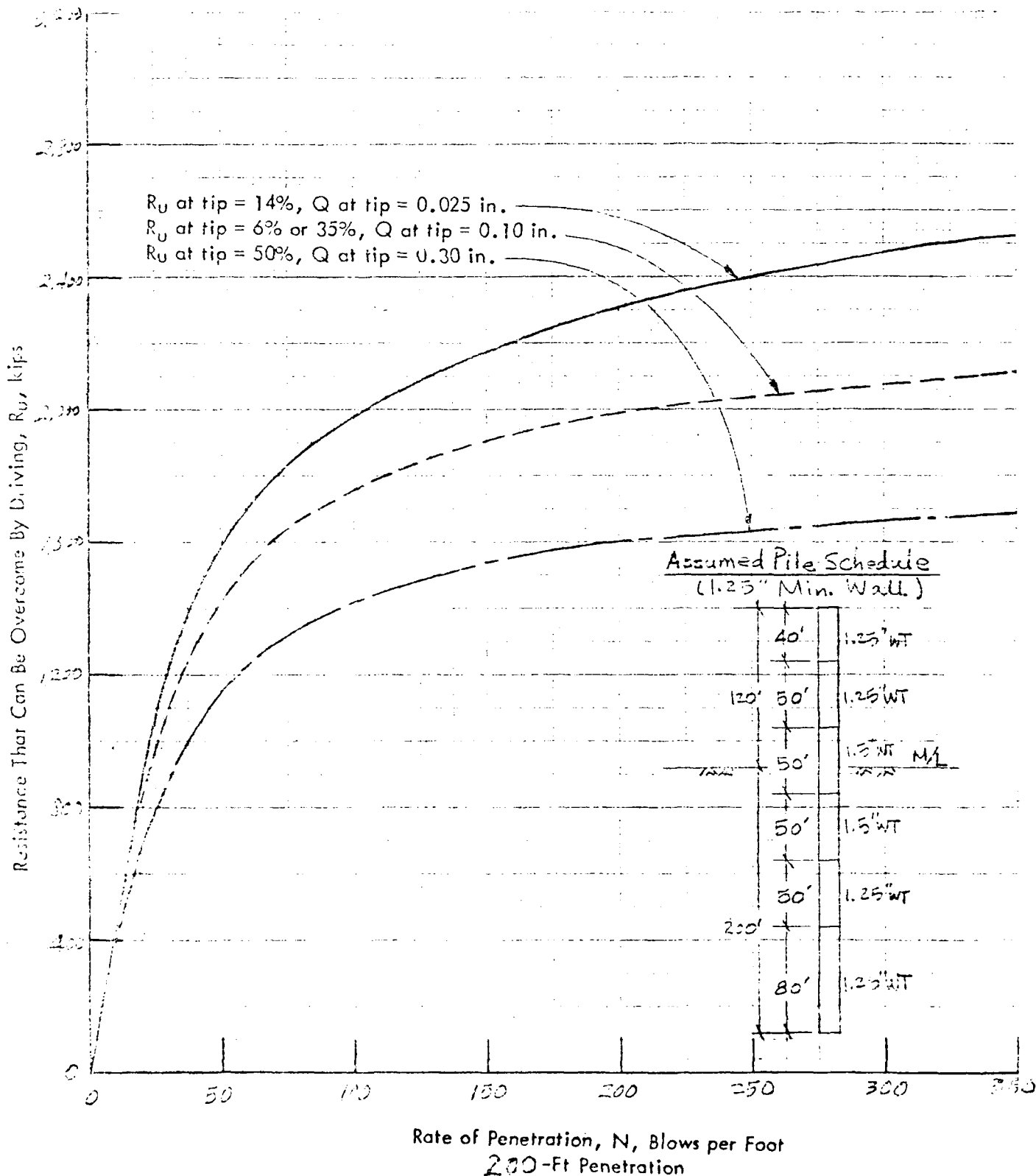
Vulcan 040 Hammer
 Wt. of Ram = 40,000 lbs
 Rated Energy = 120,000 ft-lbs
 Hammer Efficiency = 0.75
 Wt. of Pile Cap = 27,800 lbs

Spring Constant = 2.78×10^6 lbs/in.
 Damping Factor, side & tip, J = 0.15
 Quake Factor, side, Q = 0.10 in.
 Quake Factor, tip, - See Above

CREST OFFSHORE, INC.

Sheet 3 of 12

By D. J. Carr Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-22-76 Job No. 27-111-92 Calculation Pile Driving Resistance Curves



CREST OFFSHORE, INC.

Sheet 3-22 of 3-22

By C. Chern Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-20-76 Job No. 22-721-92 Calculation Pile Driving Resistance Curves

Assumed Pile Schedule -- 150 FT PENETRATION
 1.5" WALL THK. MIN.

120'	40'	1.25" WT	P-0
50'	50'	1.75" WT	P-1
50'	50'	1.5" WT	P-2
50'	50'	1.5" WT	P-3
50'	50'	1.5" WT	P-4

Mudline
 150'

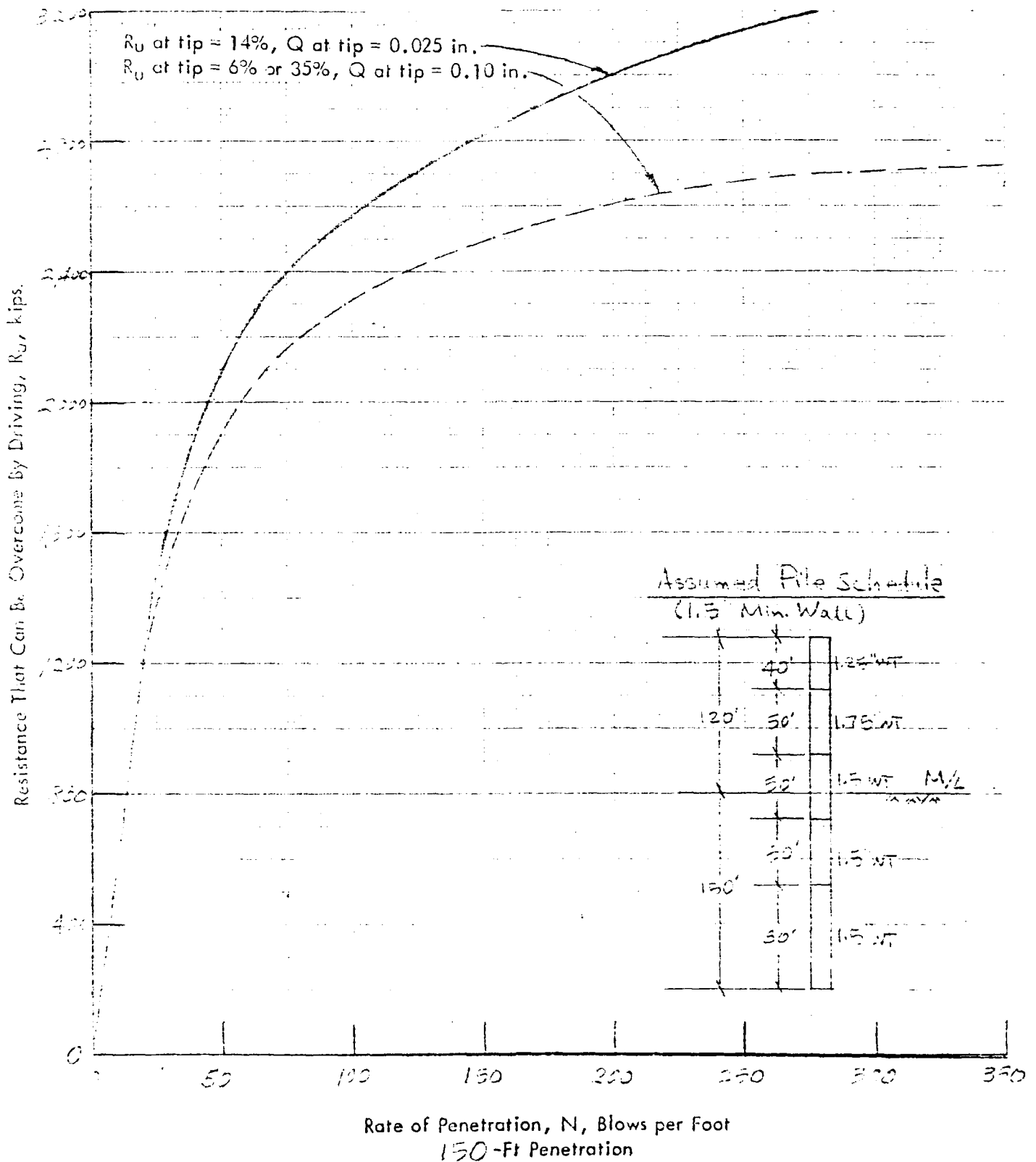
Vulcan 060 Hammer
 Wt. of Ram = 60,000 lbs
 Rated Energy = 180,000 ft-lbs
 Hammer Efficiency = 0.75
 Wt. of Pile Cap = 40,200 lbs

Spring Constant = 3.24×10^6 lbs/in.
 Damping Factor, side & tip, J = 0.15
 Quake Factor, side, Q = 0.10 in.
 Quake Factor, tip, - See Above

CREST OFFSHORE, INC.

Sheet 235 of 237

By C. C. Carr Client U.S. NAVY Subject Structural Concept of Foundation
 Date 4-22-76 Job No. 27-77-92 Calculation Pile Driving Resistance Calc.



By C. Chenn Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-22-76 Job No. 22-111-92 Calculation on Pile Driving Resistance Curve

Assumed Pile Schedule -- 200 FT PENETRATION
 1.5' WALL THK. MIN.

120'	1.5' WT	1.25' WT	P-6
60'	1.5' WT	1.75' WT	P-5
60'	1.5' WT	1.75' WT	P-4
60'	1.5' WT	1.5' WT	P-3
60'	1.5' WT	1.5' WT	P-2
60'	1.5' WT	1.5' WT	P-1

Vulcan 060 Hammer

Wt. of Ram = 60,000 lbs

Rated Energy = 180,000 ft-lbs

Hammer Efficiency = 0.75

Wt. of Pile Cap = 40,200 lbs

Spring Constant = 3.24×10^6 lbs/in.

Damping Factor, side & tip, J = 0.15

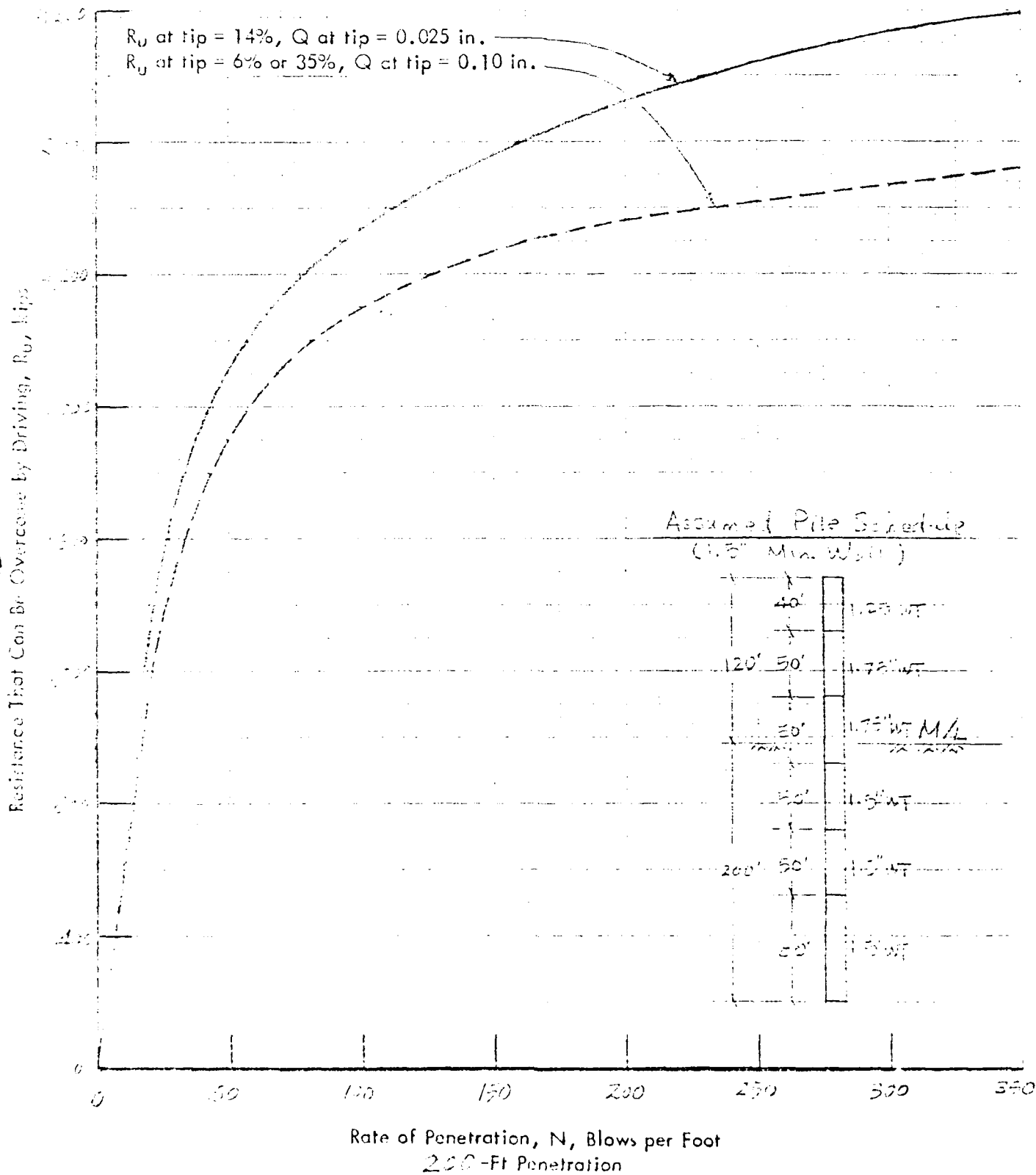
Quake Factor, side, Q = 0.10 in.

Quake Factor, tip, - See Above

CREST OFFSHORE, INC.

Sheet 2250-20

By C. C. C. Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-2-58 Job No. 22-721-72 Calculation Pile Driving Resistance



SECTION 4

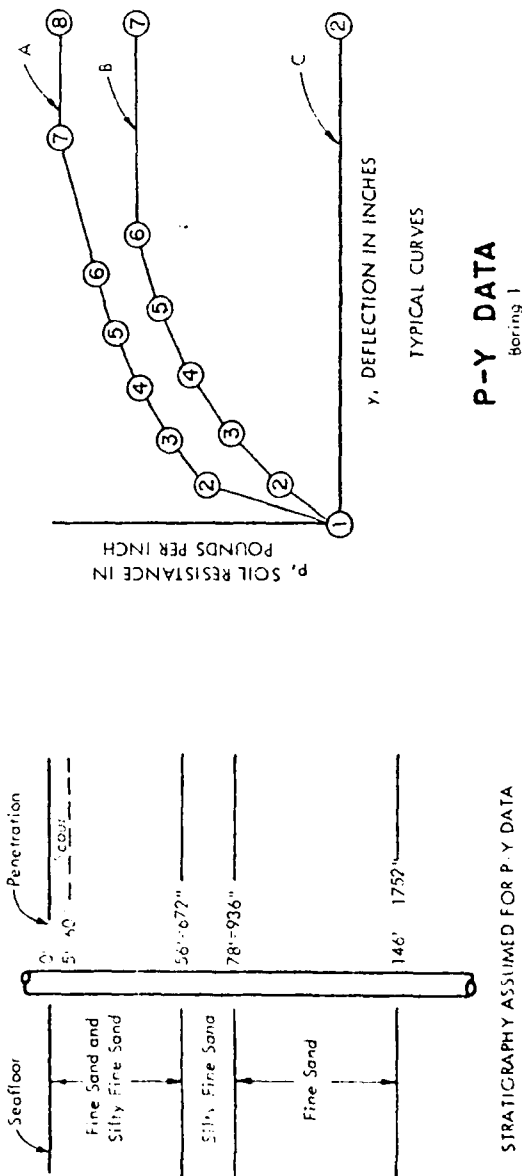
LATERALLY LOADED PILE CAPACITY

4.1 INTRODUCTION

This section evaluates the pipe pile capacity under lateral loads. The computer program used to perform the computation was developed by T. A. Haliburton at Oklahoma State University. The program printouts were compiled in APPENDIX A.3.

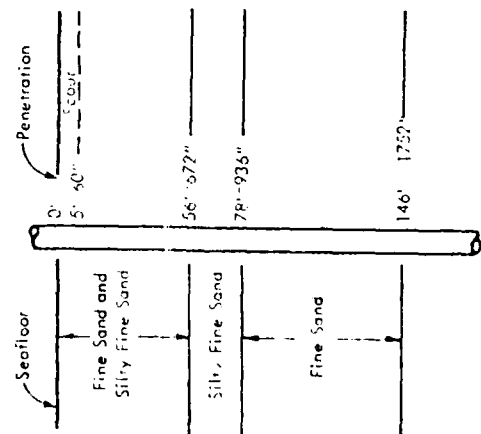
By C. Chern Client U. S. NAVY Subject Structural Concept Training
Date 4-13-76 Job No. 27-771-92 Calculation Laterally Loaded Pole Caps

4.2 SOIL DATA

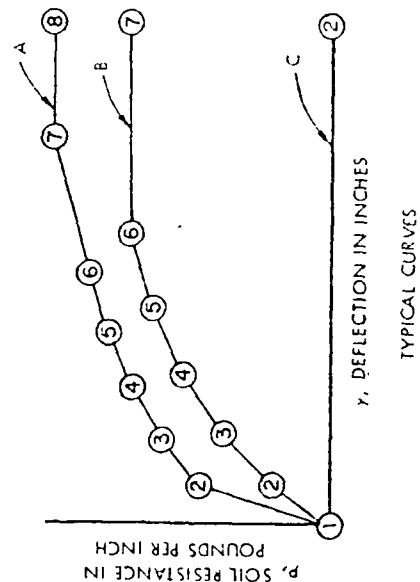
[illegible]

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-13-76 Job No. 27-77L-2 Calculation Later Dynamic P-y Capacity

Fig. 10. Dynamic P-y Points													
Radius inches	Type Curve	Cumulative of Curve Points											
		Y ₁	P ₁	Y ₂	P ₂	Y ₃	P ₃	Y ₄	P ₄	Y ₅	P ₅	Y ₆	P ₆
00.160	C	0	0	0	0	0	0	0	0	0	0	0	0
96	A	0	0	0	0	0	0	0	0	0	0	0	0
163	A	0	0	0	0	0	0	0	0	0	0	0	0
212	A	0	0	0	0	0	0	0	0	0	0	0	0
264	A	0	0	0	0	0	0	0	0	0	0	0	0
336	A	0	0	0	0	0	0	0	0	0	0	0	0
420	A	0	0	0	0	0	0	0	0	0	0	0	0
430	A	0	0	0	0	0	0	0	0	0	0	0	0
672	A	0	0	0	0	0	0	0	0	0	0	0	0
673	B	0	0	0	0	0	0	0	0	0	0	0	0
920	B	0	0	0	0	0	0	0	0	0	0	0	0
937	A	0	0	0	0	0	0	0	0	0	0	0	0
1752	A	0	0	0	0	0	0	0	0	0	0	0	0



STRATIGRAPHY ASSUMED FOR P-Y DATA



P-Y DATA
Boring 1

By C. Cherr Client U.S. NAVY Subject Structural Concept Analysis of pile
Date 4-22-76 Job No. 27-771-92 Calculation Lateral Load Pile Capacity

4.3 SECTION PROPERTIES

(1) Dimensions
36" O.D. x 1.75" WT

$$I_1 = 27,633.00 \text{ in}^4$$

$$A_1 = 183.3 \text{ in}^2$$

36" O.D. x 1.50" WT

$$I_2 = 24,234.25 \text{ in}^4$$

$$A_2 = 162.58 \text{ in}^2$$

By C. Chong Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-13-76 Job No. 27-771-92 Calculation Intermittent Pile Capacity

(ii) Pile Top Restraint

$$K = \frac{3.5EI}{L} \quad \left(= \frac{M}{\theta} \right)$$

where $E = 29,000 \text{ ksi}$

36" x 1.75" WT $I = 27,683.0 \text{ in}^4$

$$L = 32 \text{ ft} = 384 \text{ in}$$

$$K = \frac{3.5 \times 29,000 \times 27,683.0}{384}$$

$$= 7,317,251 \text{ in-kips/rad.}$$

$$\left(\frac{\text{k}}{\text{in}} \cdot \frac{\text{in}^4}{\text{in}} = \text{k-in} \right)$$

By C. Chern Client H&M 11/1/77 Subject Structural Load for Foundation
Date 4-22-78 Job No. 27-77.1.92 Calculation Lateral Load LP - Cyclic

(iii) Loadings at Pile Top (Pile C)

(See Computer Printout) Mom due to wind and wave
SEALOAD-2

$$M_w + M_{ws} = 64,837 \text{ FT-KIP}$$

Mom. due to boat landing

$$M_L = 4,206 \text{ FT-KIP}$$

Mom. due to stairs

$$M_s = 10,123 \text{ FT-KIP}$$

Total moment $M = 79,171 \text{ FT-KIP}$
at midline

Total vertical load $P = 433 \text{ KIP}$

Shear due to wind and wave

$$V_w + V_{wn} = 744 \text{ KIPS}$$

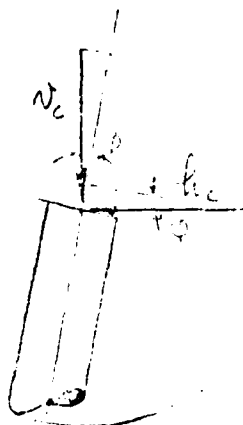
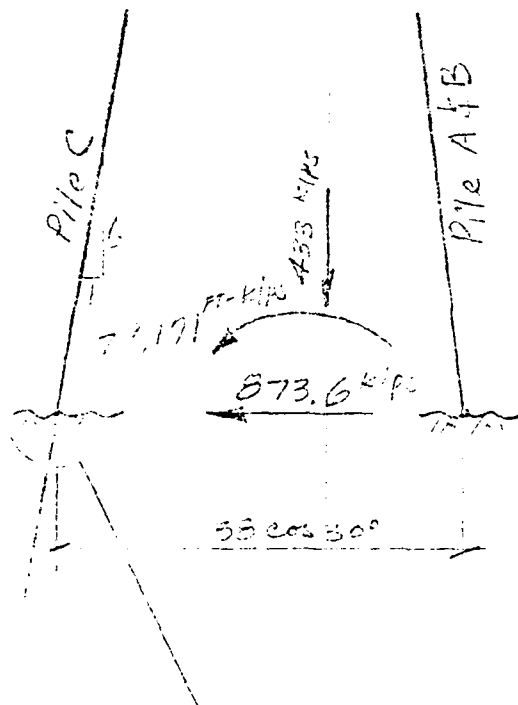
Shear due to Boat Landing

$$V_L = 45.4 \text{ KIPS}$$

Shear due to Stairs

$$V_s = 51.2 \text{ KIPS}$$

Total Shear = 873.6 kips
at midline



By C. Cherr Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-22-76 Job No. 27-771-92 Calculation Laterally Loaded Pile Capacity

Max. Compression

$$V_c = \frac{1}{3} V = 291.2 \text{ kips}$$

$$V_c = \frac{M}{530.440'} + \frac{P}{3} = 1576.2 + 14.3$$

$$= 1720.5 \text{ kips}^{**}$$

Axial Compression $A_c = V_c \cos \phi + h_c \sin \phi$

$$= 1720.5 \times \frac{6}{\sqrt{37}} + 291.2 \times \frac{1}{\sqrt{37}}$$

$$= 1697.1 + 47.9$$

$$= 1745. \text{ kips}$$

Shear $S_c = h_c \cos \phi - V_c \sin \phi$
 (under Axial Compression)

$$= 291.2 \times \frac{6}{\sqrt{37}} - 1720.5 \times \frac{1}{\sqrt{37}}$$

$$= 287.2 - 282.8$$

$$= 4.4 \text{ kips}$$

check: ** $V_c = 1860 \text{ kips}$ (Axial compression including live and
 additional dead load on equipment and
 $S_c = 287.2 - 305.8$ top deck)

$$= 18.6 \text{ kips}$$

< 51.8 kips (shear under axial
 tension)

By C. Chern Client U.S. NAVY

Subject Structural Concept Analysis

Date 4-22-76 Job No. 27-771-92

Calculation Laterally Loaded Pile Capacity

Max. Tension

$$V_t = \frac{M}{58 \cos 30^\circ} - \frac{P}{3} = 1431.9 \text{ KIPS}$$

$$h_t = h_c = 291.2 \text{ KIPS}$$

Axial Tension

$$A_t = V_t \cos \phi + h_t \sin \phi$$

$$= 1431.9 \times \frac{6}{\sqrt{37}} + 291.2 \times \frac{1}{\sqrt{37}}$$

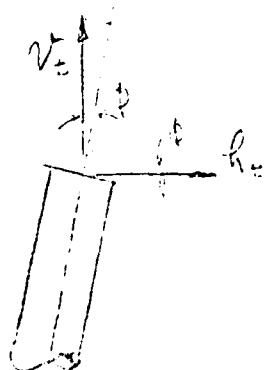
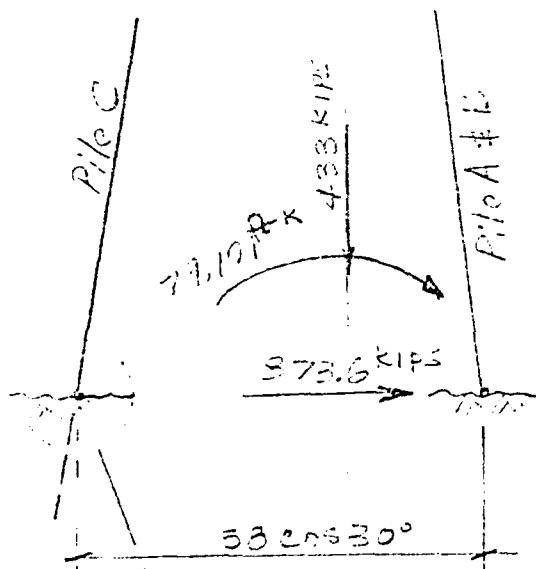
$$= 1460 \text{ KIPS}$$

Shear

$$S_t = V_t \sin \phi - h_t \cos \phi$$

$$= 1431.9 \times \frac{1}{\sqrt{37}} - 291.2 \times \frac{6}{\sqrt{37}}$$

$$= -51.8 \text{ KIPS}$$

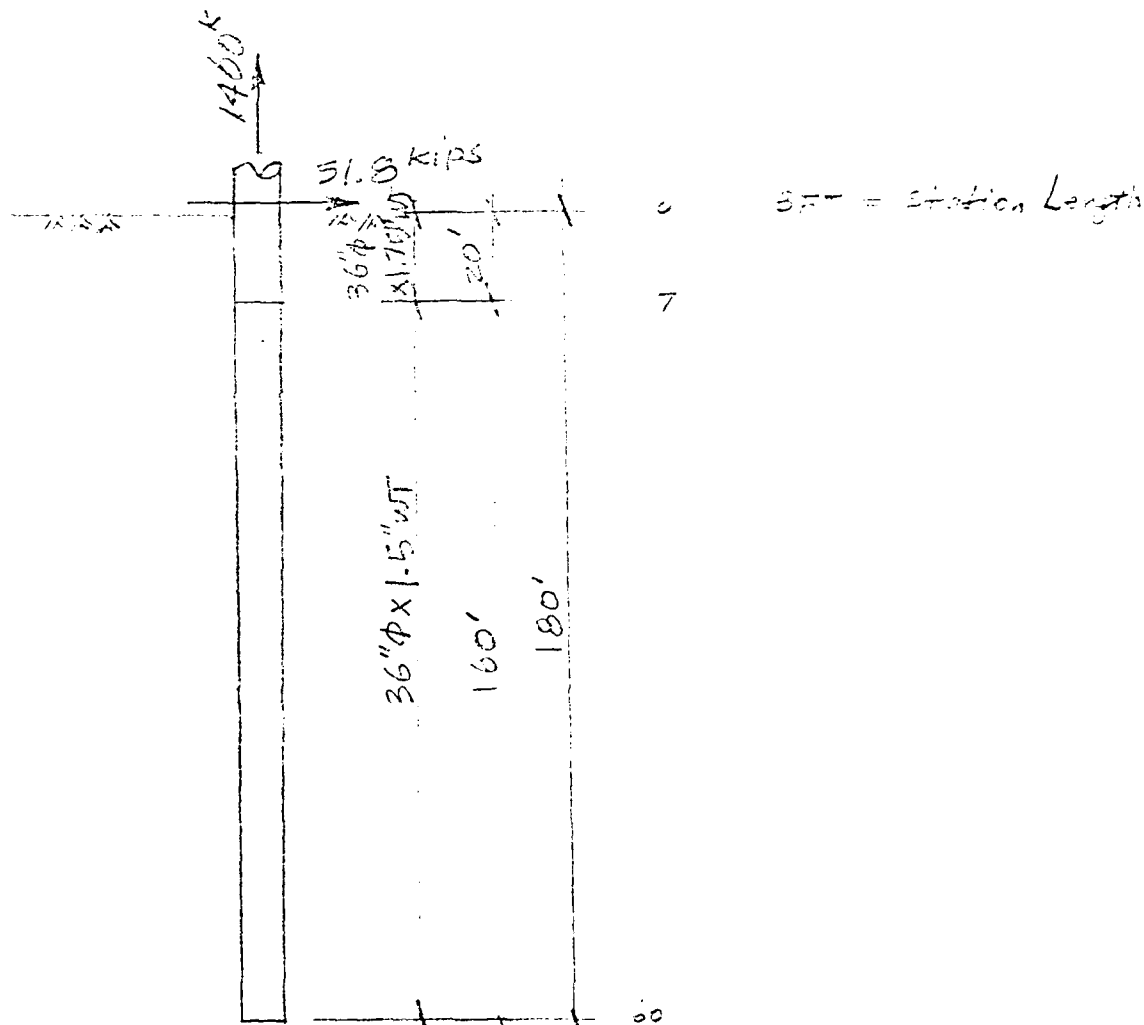


CREST OFFSHORE, INC.

Sheet 4.02 of 12 25 File

By C. Shiro Client U.S. Navy Subject Structural Concept for pile
 Date 4-22-76 Job No. 27-771-92 Calculation Lateral Load Pile Capacity

(iv) Estimated Penetration - 150 FT Below mud line



CREST OFFSHORE, INC.

Sheet 4.12 of 12

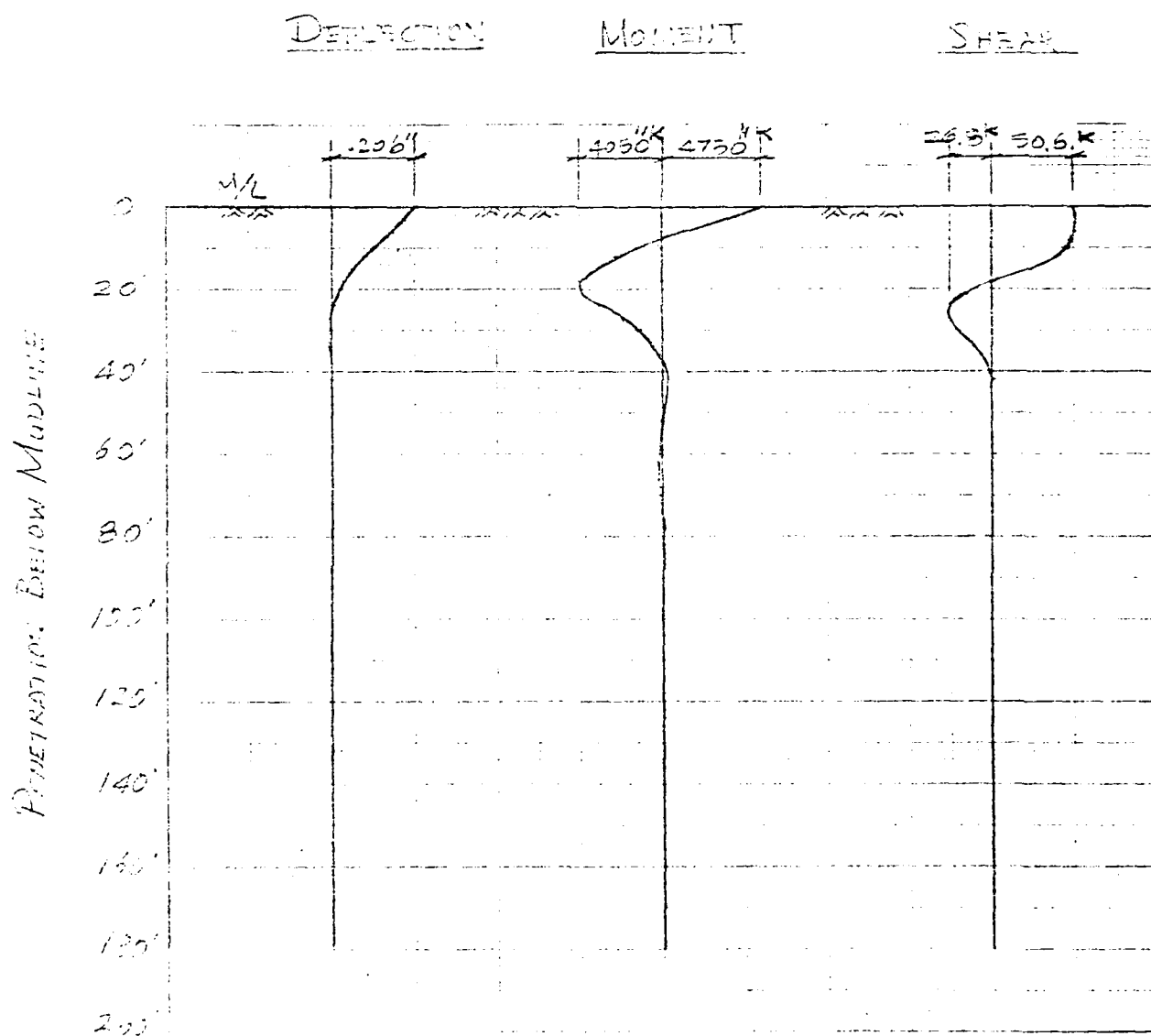
By C. Chern Client U.S. NAVY

Structural Concept Analysis

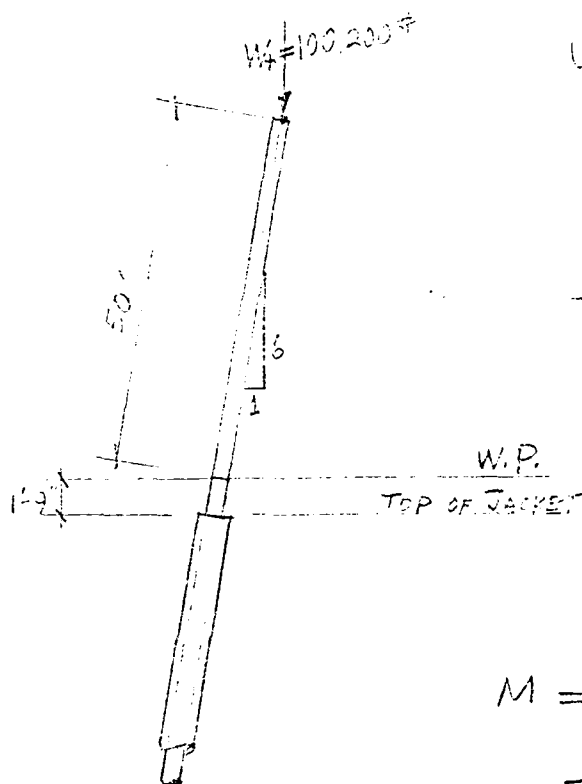
Date 4-23-76 Job No. 27-771-92

Calculation LL by Load Pile Capacity

4.4 SHEAR, MOMENT AND DEFLECTION DIAGRAMS



By C. Chen Client U.S. NAVY Subject Structural Concept / Analysis
 Date 4-23-76 Job No. 27-771-92 Calculation Laterally Loaded Pile Capacity

4.5 MINIMUM WALL THICKNESS REQUIREMENTS

Use Vulcan 060 Hammer

Wt. of Hammer = 62,000 LBS

Wt. of Pile Cap = 40,200 LBS

Total Wt. = 100,200 LBS

Bending moment at the top
of jacket leg is

$$M = 100,200 \times \left[\frac{1}{6} (51.75) \right] \\ = 864,225 \text{ ft-lbs}$$

Axial Compression at the
top of jacket leg (Pile)

$$P = 100,200 \times \frac{6}{\sqrt{37}} = 98,837 \text{ LBS}$$

$$36" \text{ O.D. } \times 1.25" \text{ WT} \quad I = 20,630 \text{ in}^4$$

$$A = 136.5 \text{ in}^2$$

$$\text{Combined Stress } \sigma_c = \frac{M d}{I} + \frac{P}{A}$$

$$\sigma_c = \frac{(864,225 \times 12) \times 18}{20,630} + \frac{98,837}{136.5}$$

CREST OFFSHORE, INC.

Sheet 4.12 of 12 ^{73-pile}

By E. Chen Client U.S. NAVY Subject Structural Concept Analysis
Date 4-23-76 Job No. 27-771-72 Calculation Lateral Load Pile Cap

$$\begin{aligned}\sigma_c &= 9,773 \text{ psi} \\ &= 9.8 \text{ ksi}\end{aligned}$$

Use Impact factor of 2 for the dynamic effect on piles during driving:

$$\sigma_{cd} = 2 \times \sigma_c = 19.6 \text{ ksi} < 22 \text{ ksi}$$

Say O.K.

SECTION 5

AXIAL PILE CAPACITY REQUIREMENTS

5.1 INTRODUCTION

The attempt of this section is to develop axial pile capacity requirements for the three-pile structure under a set of given loading conditions. The results serve as guide lines for optimizing structural steel weight as presented in the following section (Section 6).

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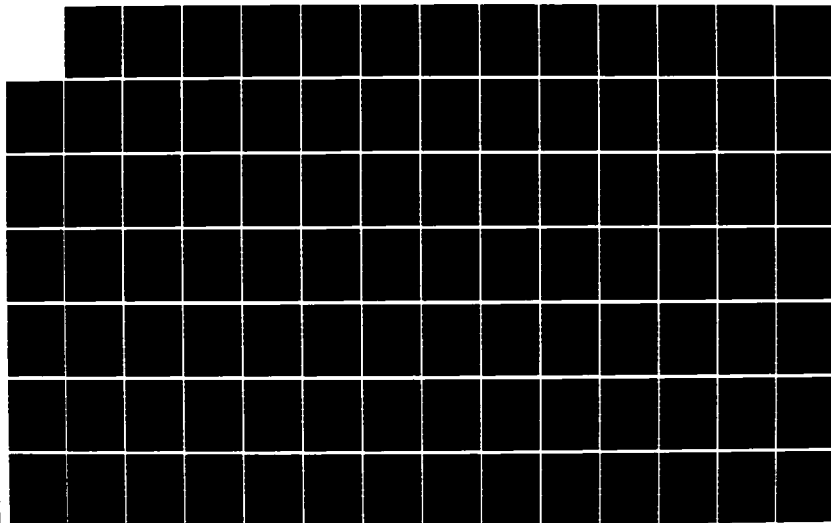
STRUCTURAL CONCEPT ANALYSIS REPORT FOR THE EAST COAST
AIR COMBAT MANEUVER. (U) CREST ENGINEERING INC TULSA OK
MAY 76 27-771-92-APP-C CHES/NAVFAC-FPO-7601-APP-C
N62477-76-C-0179

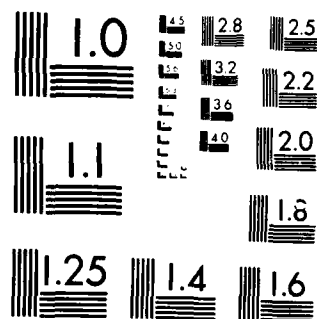
2/7

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F/G 13/13

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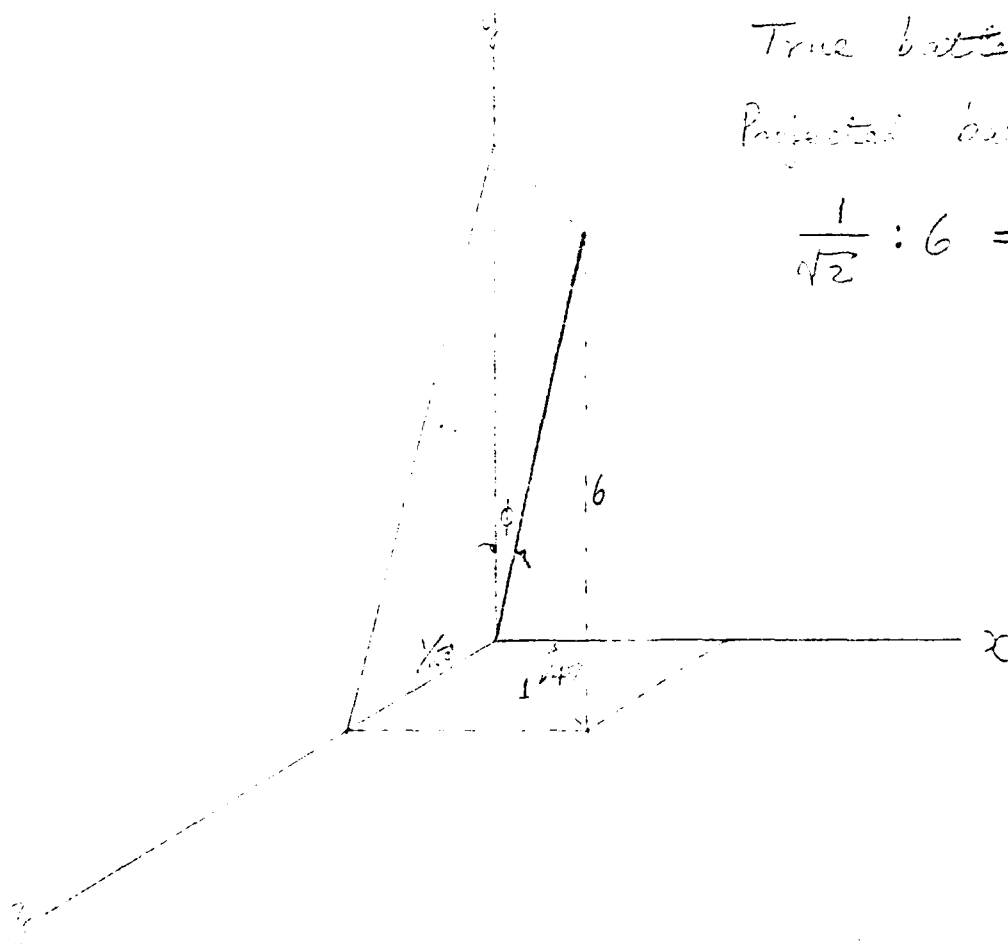
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

By C. C. [unclear] Client U.S. NAVY Subject Structural Concept Analysis
 Date 8-20-76 Job No. 27-711-72 Calculation Axial Pile Capacity

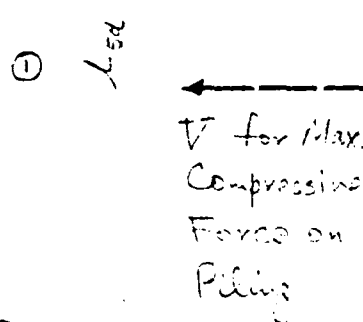
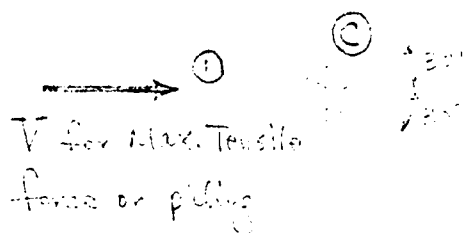
True batter of piles 1:6

Projected batter of piles

$$\frac{1}{\sqrt{2}} : 6 = 1 : 8.485$$



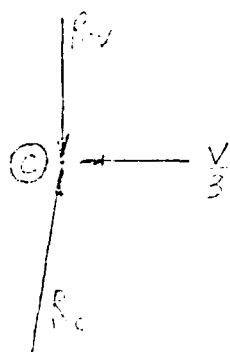
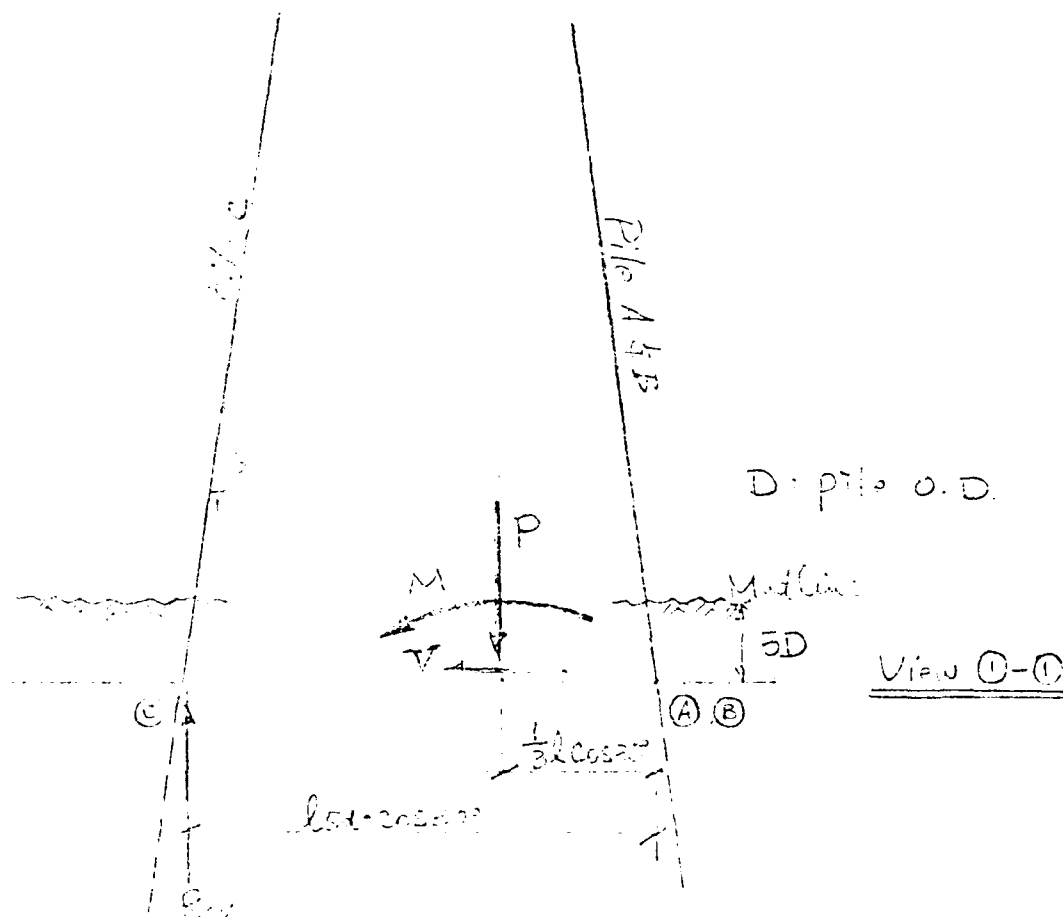
PLAN AT BD BELOW
MUDLINE



$$L_{\text{eff}} \cos 30^\circ = \frac{1}{2} L_{\text{eff}} \cos 30^\circ$$

by S. C. Brown Client: U.S. Navy Subject: Design of Concept for
 Date: 3-25-72 Job No: 57-771-3 Calculation: Axial Pile Capacity

5.3 PILE CAPACITY REQUIREMENT IN COMPRESSION



$$R_c = \frac{6}{\sqrt{37}} R_{cv} + \frac{1}{\sqrt{37}} \frac{V}{3} \quad (1)$$

$$R_{cv} = \frac{\sqrt{37}}{6} R_c - \frac{1}{13} V \quad (2)$$

By C. R. Kern Client U.S. Navy Subject Structural Concept Analysis
 Date 2-22-75 Job No. 37-701-24 Calculation on Axis File Capacity Report

Summation of moments about axis (A)-(B)

$$R_{cs} l_{cs} \cos 30^\circ = M + \frac{P l_{sd}}{3} \cos 30^\circ \quad (3)$$

$$\left(R_{cs} - \frac{P}{3}\right) l_{cs} \cos 30^\circ = M$$

$$l_{sd} = \frac{M}{\left(R_{cs} - \frac{P}{3}\right) \cos 30^\circ} \quad (4)$$

Substituting Eq. (3) into Eq. (4)

$$l_{sd} = \frac{M}{\left(\frac{\sqrt{37}}{6} R_c - \frac{V}{18} - \frac{P}{3}\right) \cos 30^\circ} \quad (5)$$

$$M = 107,302 \text{ ft. kips}$$

$$D = 455 \text{ kips}$$

$$V = 1264.6 \text{ kips}$$

$$\frac{P}{3} = 150.$$

$$\frac{V}{18} = 69.7$$

$$l_{sd} = \frac{123,902}{\left(\frac{\sqrt{37}}{6} R_c - 219.7\right)} \quad (5a)$$

$$(R_c)_{min} = \frac{6 \times 219.7}{\sqrt{37}} = 216.7 \text{ kips}$$

CREST OFFSHORE, INC.

Sheet 2.25 of 14

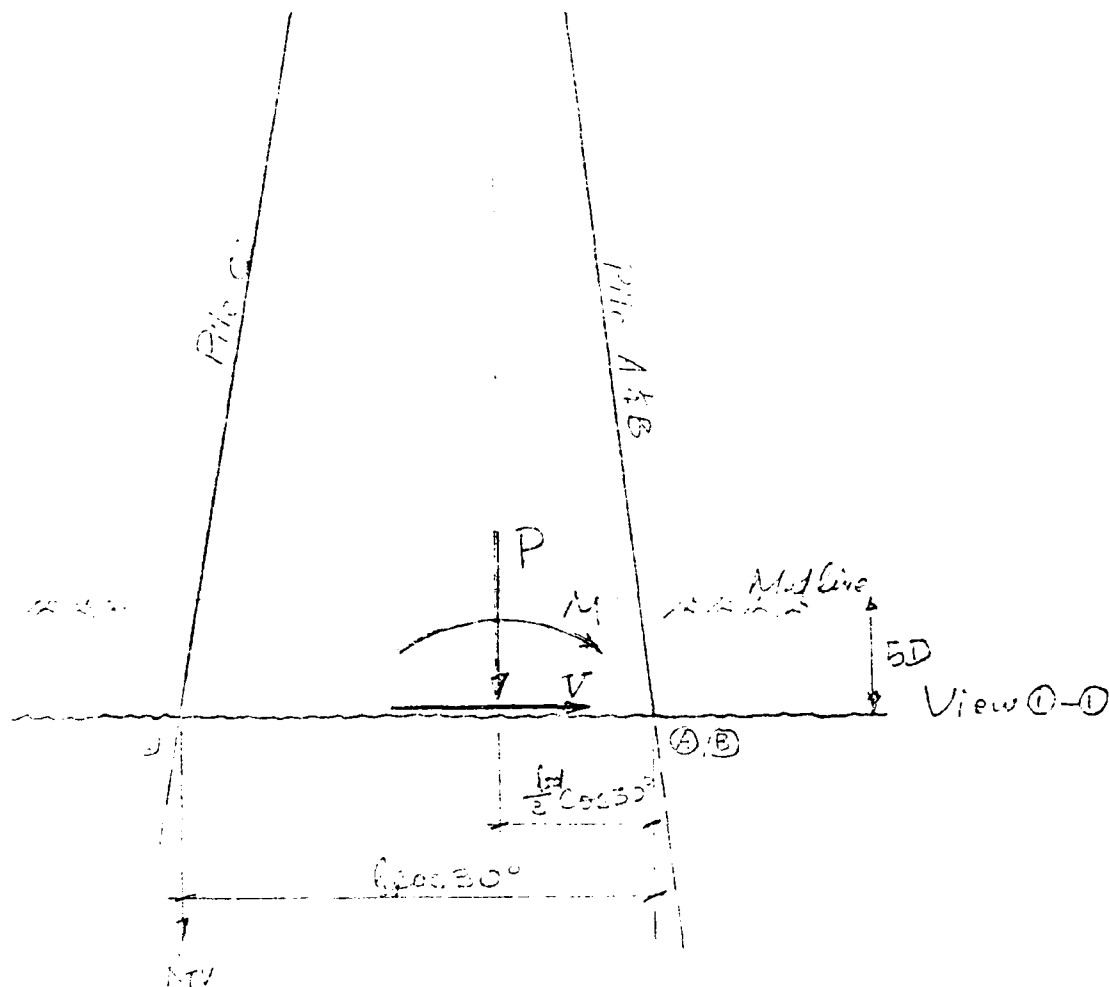
By C. Chien Client U.S. NAVY Subject Structural Concept Design
 Date 3-25-76 Job No. 22-771-74 Calculation Adipole Cap. of Pile

$$l_{sl} = \frac{123,900}{\frac{\sqrt{37}}{6} R_c - 219.7}$$

R_c (k'si)	$\frac{\sqrt{37}}{6} R_c - 219.7$	$l_{sl} = \frac{123,900}{\frac{\sqrt{37}}{6} R_c - 219.7}$ (ft)
216.7	0	∞
500.	287.2	431.4
750.	540.6	229.2
1,000.	794.1	156.0
1,250.	1,047.5	118.3
1,500.	1,301.0	95.2
1,750.	1,554.4	79.7
2,000.	1,807.9	68.5
2,250.	2,061.3	60.1
2,500.	2,314.8	53.5
2,750.	2,568.2	48.2
3,000.	2,821.7	43.9

By C. C. C. C. Client U. S. Navy Subject Chart 5.2 Crest Offshore (S. 11)
 Date 3-12-70 Job No. 57-771-94 Calculation 5.2 Pile Capacity Report

5.1 PILE CAPACITY REQUIRED IN TENSION

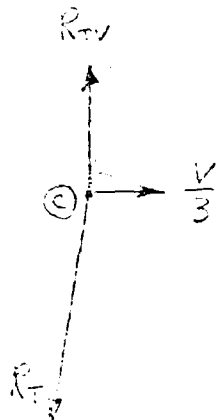


Force of moment about axis ①-②

$$R_{TV} \left(\cos 30^\circ - \frac{P}{3} \cos 30^\circ \right) = M \quad (6)$$

$$l_{st} = \frac{M}{\left(R_{TV} + \frac{P}{3} \right) \cos 30^\circ} \quad (7)$$

by S. D. Perry Client U.S. Navy Substructure Concrete Analysis
 Date 8-2-75 Job No. 22-711-2 Calculation Wind Pipe Capacity Req.



$$R_T = \frac{6}{\sqrt{37}} R_{TV} + \frac{1}{\sqrt{37}} \left(\frac{V}{3} \right)$$

$$R_{TV} = \frac{\sqrt{37}}{6} R_T - \frac{V}{18} \quad (8)$$

Substituting Eq. (8) into Eq. (7)

$$\left(= \frac{M}{\left(\frac{\sqrt{37}}{6} R_T - \frac{V}{18} + \frac{P}{3} \right) \cos 30^\circ} \right) \quad (9)$$

$$M = 107,302 \text{ ft-kips}$$

$$P = 450 \text{ kips}$$

$$V = 1284.6 \text{ kips}$$

$$\frac{V}{18} = 69.7$$

$$\left(= \frac{123,902}{\frac{\sqrt{37}}{6} R_T + 80.3} \right)$$

$$R_T \geq 0$$

$$L_{max} = 1543.0 \text{ ft}$$

$$\text{when } R_T = 0$$

CREST OFFSHORE, INC.

Sheet 5.22 of 14

Client 11.5.11.11

Subject Start-up Concept Analysis

Date 8.3.82 Sub No 27.11.11.11

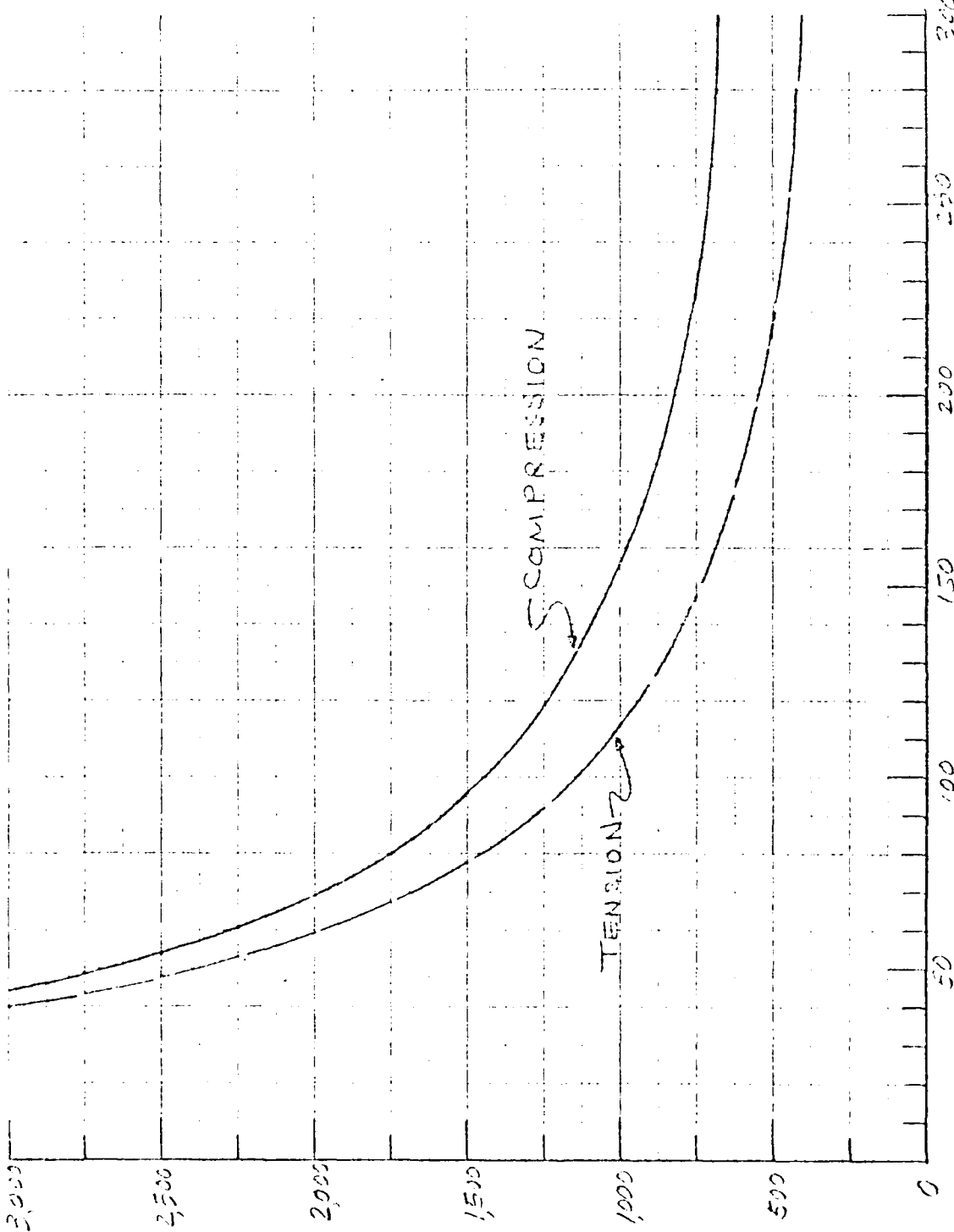
Calculation Ed. Pile Capacity Regit

R_T (kps)	$\frac{\sqrt{37}}{6} R_T + 30.3$	$\left(= \frac{123.002}{\frac{\sqrt{37}}{6} R_T + 50.3} \right)$
0	30.3	1543.0
250	333.7	371.2
500	537.2	211.0
750	640.6	147.4
1000	1,094.1	113.2
1,250	1,347.5	91.9
1,500	1,601.0	77.4
1,750	1,854.4	66.5
2,000	2,107.9	58.7
2,250	2,361.3	52.3
2,500	2,614.8	47.4
2,750	2,868.2	43.2
3,000	3,121.7	39.7

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Sheet 5.10 of 14

By C. Chen Date 11.8.11 For Shanghai Project Shanghai
 Job No 27-77-22 Calculation 420 Pipe Capacity



BASE SPACING (FT)
 (5-D Below Mudline)

REQUIRED PIPE PILE CAPACITY (KIPS)

by C. P. Brown, D. S. 2117

Subject: Structural Computations

Date: 12-2-78 Job No. 27-11-11

Calculation: AWH, R. C. 11, R. 11

LOADS ON P-PILE STRUCTURE (L=1)

$$\begin{aligned}
 \text{Total Gravity Load} & \quad SP_c = 620.5 \\
 & \quad RP_c = 466.5 \text{ kips} \\
 \text{Base Shear} & \quad V = 836.7 \text{ kips} \\
 \text{Moment} & \quad M = 79,578 \text{ ft-kips}
 \end{aligned}$$

Wave Coefficient

$$\begin{aligned}
 L &= \frac{M}{\left(\frac{\sqrt{37}}{6} R_c - \frac{V}{15} - \frac{P_c}{3}\right) \cos 30^\circ} \\
 &= \frac{79,578}{\left(\frac{\sqrt{37}}{6} R_c - \frac{836.7}{15} - \frac{620.5}{3}\right) \cos 30^\circ} = \frac{91,859}{\frac{\sqrt{37}}{6} R_c - 236.2}
 \end{aligned}$$

Wave Tension

$$\begin{aligned}
 L &= \frac{M}{\left(\frac{\sqrt{37}}{6} R_T - \frac{V}{15} + \frac{P_c}{3}\right) \cos 30^\circ} \\
 &= \frac{79,578}{\left(\frac{\sqrt{37}}{6} R_T - \frac{836.7}{15} + \frac{466.5}{3}\right) \cos 30^\circ} \\
 &= \frac{91,827}{\frac{\sqrt{37}}{6} R_T + 106.2}
 \end{aligned}$$

CREST OFFSHORE, INC.

Sheet 2.17 of 14

By C. J. [unclear] Client U.S. [unclear] Subject Stiffness [unclear]
 Date 5-2-77 Job No. 87-001-15 Calculation 2.17 Stiffness [unclear]

$$f = \frac{91.889}{\frac{\sqrt{37}}{6} R_c - 256.2}$$

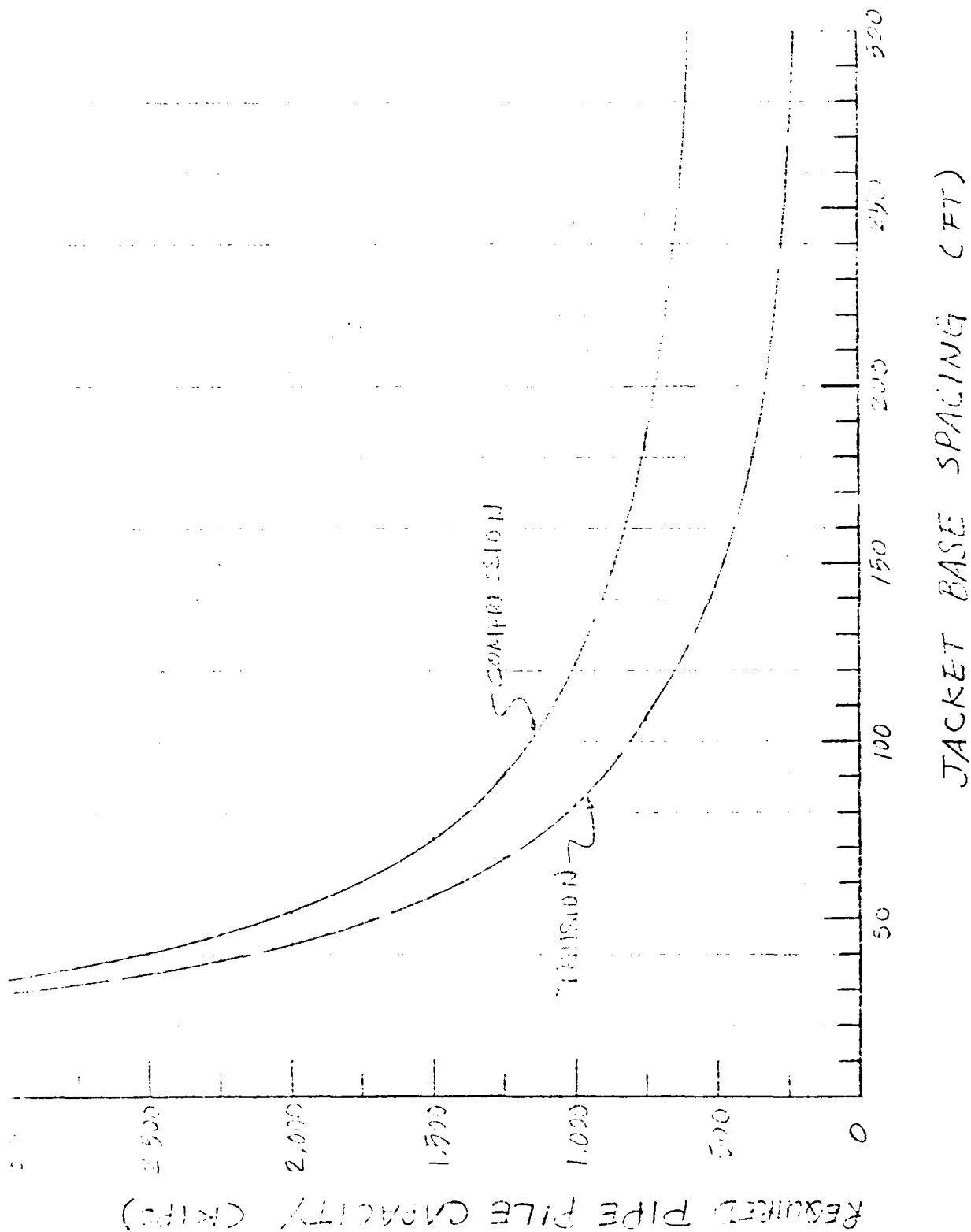
R_c	$\frac{\sqrt{37}}{6} R_c - 256.2$	$f = \frac{91.889}{\frac{\sqrt{37}}{6} R_c - 256.2}$
KIPS	KIPS	FT
250.7	0	∞
300.	250.7	366.5
750.	504.1	182.3
1000.	737.6	124.3
1250.	1011.0	90.9
1500.	1234.5	72.7
1750.	1517.9	60.5
2000.	1771.4	51.9
2250.	2024.8	45.4
2500.	2278.3	40.3
2750.	2531.7	36.3
3000.	2785.2	33.0

Client Shell Subject Sh. Off. Design
 Date 5-2-77 Job No. 2-1-77 Calculation 2-1-77

$$C = \frac{91.557}{\frac{\sqrt{37}}{6} R_T + 106.2}$$

R_T	$\frac{\sqrt{37}}{6} R_T + 106.2$	$C = \frac{91.557}{\frac{\sqrt{37}}{6} R_T + 106.2}$
KIPS	KIPS	FT
0	106.2	865.2
250	359.6	255.5
500	613.1	149.9
750	866.5	106.0
1000	1120.0	82.0
1250	1373.4	66.9
1500	1626.9	56.5
1750	1880.3	48.9
2000	2133.8	43.1
2250	2387.2	38.5
2500	2640.7	34.8
2750	2894.1	31.8
3000	3147.6	29.2

Client: U.S. Navy Subject: Structural Concept for Jacket
 Date: 2-12-76 Job No: 22-111-76 Calculation: Drill Pipe Capacity



SECTION 6
STRUCTURAL STEEL WEIGHT VARIATION

6.1 INTRODUCTION

Set forth herein is the computations of the structural steel weights, respectively, for the piling sizes of 36", 39" and 42".

In the process of computations, the following member sizes of the structural components were assumed to be common regardless of varying piling diameters.

- (1) Bracings
- (2) Jacket Leg wall thickness
- (3) Superstructures
- (4) Miscellaneous items such as boat landing, stairway, etc.

By C. Chappell Client U.S. Navy Subject Structural Concept Analysis of
 Date 4-25-96 Job No. 7-771-92 Calculation Structural Steel Etc. Details

6.2 PLAN AND ELEVATION

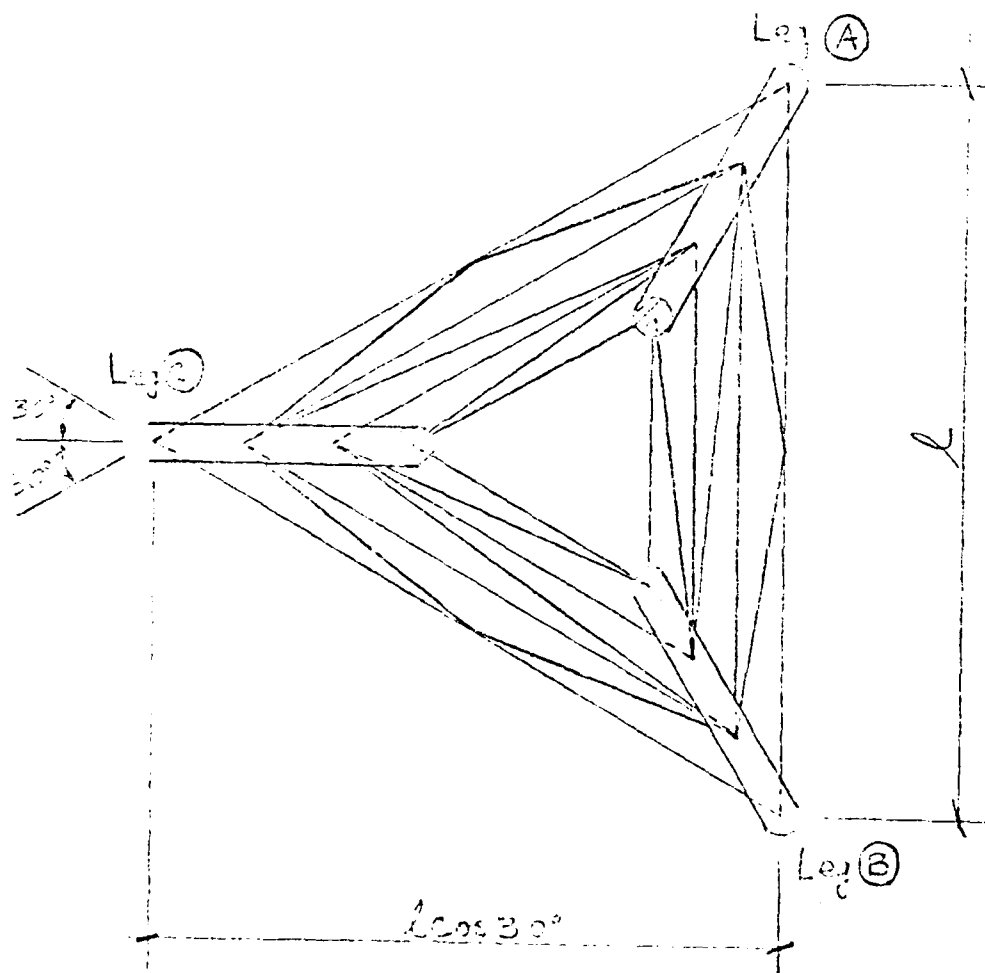
(a) Plan View of Jacket Member Sizes:

(i) Bracing: See Pg. 6.07

(ii) Leg: $(D+4)"$ O.D. X $.5"$ WT, See Pg. 6.09

(iii) Leg Joint Can: $(D+5)"$ O.D. X $1"$ WT, See Pg. 6.09

* D = O.D. of Pipe Pile

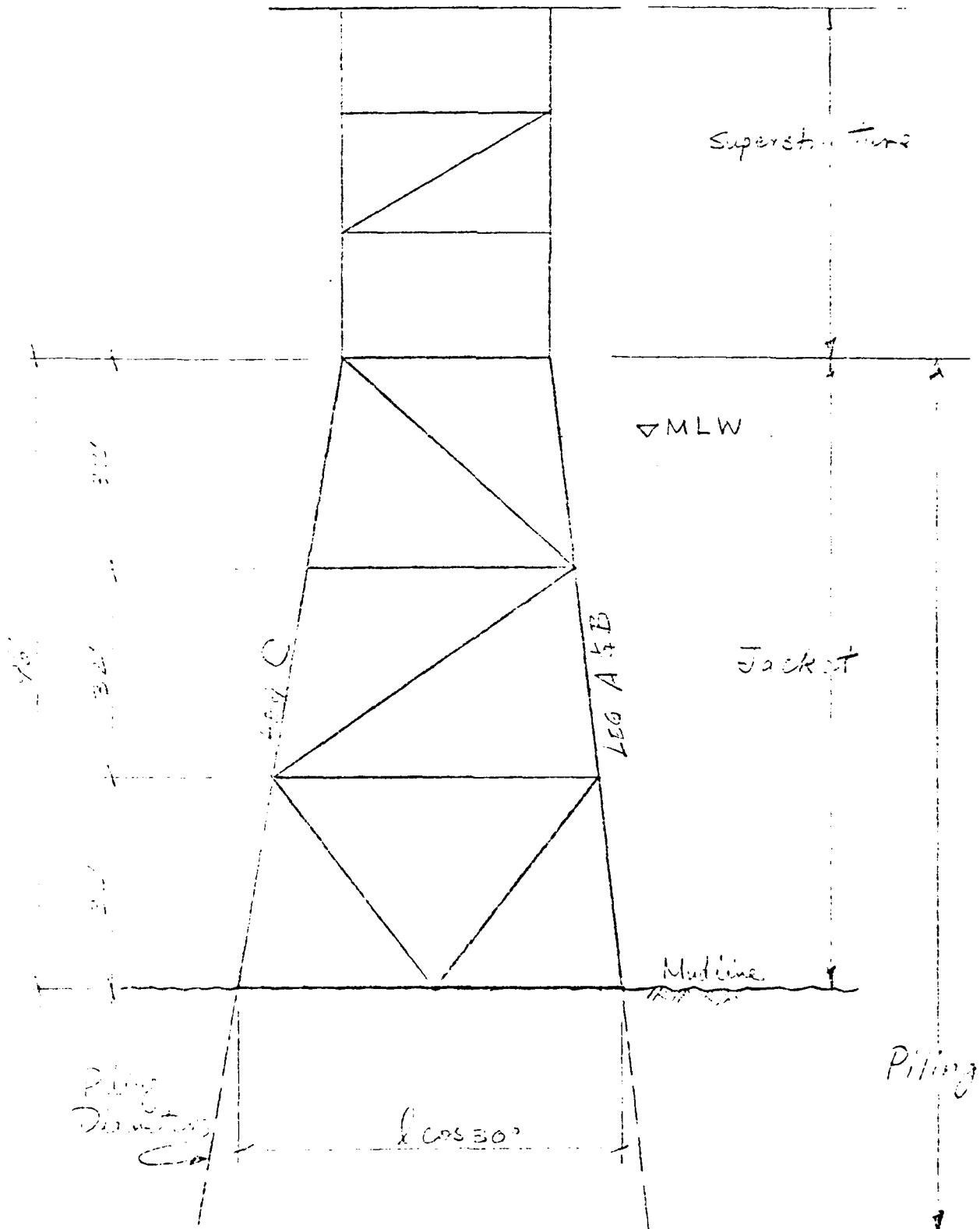


CREST OFFSHORE, INC.

Sheet 6.03 of 27

By C. Chan Client U.S. Navy Subject Structural Concept Analysis
Date 4-22-86 Job No. 27-711-92 Calculation Structural Steel Calculation

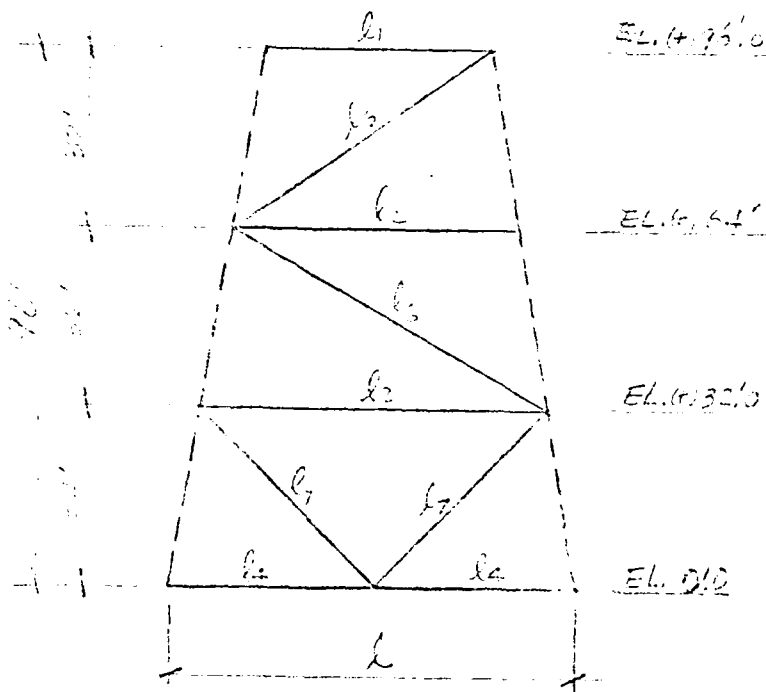
(R) Elevation of 3-Pile Structure



By C. Chou Date 11.5.11 Subject Structural Concept Analysis
 Data 4-26-26 Job No 27-771-22 Calculation Structure - Steel Plate Girder

6.3 WEIGHT OF STRUCTURES

1) Erectors (3 Rows) * Referring to Plan View shown on P. 6.02



$$l_1 \cos 30^\circ = l \cos 30^\circ - \frac{16}{3} (1 + \sin 30^\circ)$$

$$= l - 16(1.5) / \cos 30^\circ$$

$$= l - 27.7 \text{ (ft)}$$

$$l_2 = (l - l_1) \times \frac{1}{3} + l_1$$

$$= \frac{1}{3} l + \frac{2}{3} l_1 = l - 18.46$$

$$l_3 = (l - l_1) \times \frac{2}{3} + l_1$$

$$= \frac{2}{3} l + \frac{1}{3} l_1 = l - 9.23$$

$$l_4 = \frac{1}{2} l$$

$$l_5 = \sqrt{32^2 + \left[l_1 - \frac{1}{2} (l_2 - l_1) \right]^2}$$

$$= \sqrt{1024 + .25 (l_1 + l_2)^2}$$

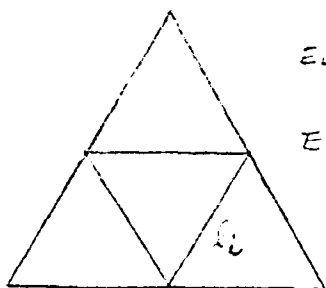
$$= \sqrt{1024 + .25 (l - 9.23)^2}$$

$$l_6 = \sqrt{32^2 + \left[l_2 + \frac{1}{2} (l_3 - l_2) \right]^2}$$

$$= \sqrt{1024 + .25 (l_2 + l_3)^2}$$

$$= \sqrt{1024 + .25 (2l - 27.7)^2}$$

$$= \sqrt{1024 + (l - 13.85)^2}$$



EL. 0'0" $l_1 = l_2 = l_3$

EL. 32' $l_1 = l_2 = \frac{1}{2} l_3$

EL. 64' $l_1 = l_2 = \frac{1}{3} l_3$

EL. 96' $l_1 = l_2 = \frac{1}{2} l_3$

By C. Charn Client U. CANARY Subject Structural Concept Analysis 13-61
 Date 4-26-76 Job No. 22-721-92 Calculation Structural Steel 14 Analysis

$$L_7 = \sqrt{32^2 + \left(\frac{1}{2} L_3\right)^2}$$

$$= \sqrt{1024 + \frac{.25}{9} (L + L - 27.7)^2}$$

$$= \sqrt{1024 + \frac{1}{9} (L - 13.85)^2}$$

$$L_3 = L_2 = \frac{1}{2} L$$

$$L_4 = \frac{1}{2} L_3 = \frac{1}{2} L - 4.61$$

$$L_{10} = \frac{1}{2} L_2 = \frac{1}{2} L - 9.23$$

$$L_{11} = \frac{1}{2} L_1 = \frac{1}{2} L - 13.85$$

$$\text{Total Length } L = L_1 + L_2 + L_3 + 2L_4 + L_5 + L_6 + 2L_7$$

$$+ 3L_8^* + 3L_9^* + 3L_{10}^* + 3L_{11}^*$$

$$= (L - 27.7) + (L - 18.46) + (L - 9.23) + 2\left(\frac{1}{2}L\right)$$

$$+ \sqrt{1024 + .25(L - 9.23)^2} + \sqrt{1024 + (L - 13.85)^2}$$

$$+ 2\sqrt{1024 + .111(L - 13.85)^2} + 1.5L + (1.5L - 13.83)$$

$$+ (1.5L - 27.7) + (1.5L - 41.55)$$

$$= (10L - 138.47) + \sqrt{1024 + .25(L - 9.23)^2}$$

$$+ \sqrt{1024 + (L - 13.85)^2}$$

$$+ 2\sqrt{1024 + .111(L - 13.85)^2}$$

* Values increased to take into account
 the weight of angles or extra thickness
 for corrosion protection

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Sheet 206 of 21

Client: U.S. NAVY

Subject: Structural Connection to Bridge

Date: 1-1-77 Job No. 27-77-92

Calculation: Structural Steel Detailing

l	$1024 + 0.47$	$\sqrt{1024 + .25(l - 9.25)^2}$	$\sqrt{1024 + (l - 13.25)^2}$	L TOWER LEG LENGTH (FT)
BASE STATION (FT)	(FT)	(FT)	(FT)	(FT)
50	361.53	37.94	48.23	481.52
55	411.53	37.34	52.13	537.79
60	461.53	40.85	56.16	591.01
65	511.53	44.11	60.33	640.52
70	561.53	47.13	64.63	697.21
75	611.53	49.88	69.02	751.31
80	661.53	47.71	73.48	801.52
85	711.53	49.59	78.01	878.39
90	761.53	51.53	82.60	946.13

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Sheet 6.07 of 27

By C. Chere Client NAVY Subject Structural Concepts Review
 Date 4-26-76 Job No 27-771-42 Calculation Structural Steel Plate Limit

BASE SPACING (FT)	BRACE MEMBER SIZE	TOTAL BRACE MEMBER LENGTH (FT)	UNIT WEIGHT (LBS/FT)	TOTAL WEIGHT (LBS)
50	18"φ x .5" WT	441.92	83.43	45,035
55	"	537.79	"	50,256
60	"	594.01	"	55,510
65	20"φ x .5" WT	650.52	104.13	67,739
70	"	707.31	"	73,652
75	"	764.31	"	79,588
80	22"φ x .5" WT	821.52	114.81	94,319
85	"	878.89	"	100,905
90	"	936.43	"	107,512

CREST OFFSHORE, INC.

Sheet E08 of 27

By C. Chinn Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-27-88 Job No. ET-111-92 Calculation Structural Steel Verification

(1) Jacket Legs (3-Row)



Wall 1" THK 55'-3"

Wall .5" THK 43'-9"

CREST OFFSHORE, INC.

Sheet 6.29 of 27

Project Name: Crest 115 HPH / Subject: Steel Deck Concept Preliminary
 Date: 4-2-23 Job No: 27-771-92 Calculation: Structural Steel Deck

Plate O.D. (in)	S.A. WELT					L.L.G.			Total Volume (cu ft)
	Size x Length	Net Wt (lbs/ft)	Weld Wt (lbs)	Size x Length	Net Wt (lbs/ft)	Weld Wt (lbs)	Size x Length	Net Wt (lbs)	
36	40" x 48.75'	210.93	10,283	41" x 48.75'	217.21	10,603	41" x 48.75'	22,886	
39	43" x 48.75'	226.95	11,064	44" x 48.75'	239.25	11,845	44" x 48.75'	25,374	
42	46" x 48.75'	242.97	11,845	47" x 48.75'	249.25	12,144	47" x 48.75'	28,081	

CREST OFFSHORE, INC.

Sheet 342 of 27

Client: Shell International Subject: Design of Support Structures
 Date: 11/1/77 Job No: 32-11-77 Calculation: 11/1/77 SEA

Windings (3-Resin)

		36" O.D.	38" O.D.	42" O.D.
100'	100' 40'	463.92 x 40 = 13,857 [#]	503.97 x 40 = 20,159 [#]	544.02 x 40 = 21,761 [#]
	100' 50'	640.17 x 30 = 32,007 [#]	696.21 x 30 = 34,811 [#]	732.28 x 30 = 37,614 [#]
100'	100' 100'	32,007 [#]	34,811 [#]	37,614 [#]
	100' 110'	552.70 x 30 = 27,635 [#]	600.76 x 30 = 30,038 [#]	648.82 x 30 = 32,441 [#]
100'	100' 120'	27,635 [#]	30,038 [#]	32,441 [#]
	100' 130'	552.7(AH)	600.76(AH)	648.82(AH)
TOTAL		137,841 + 552.7 AH	149,857 + 600.76(AH)	161,371 + 648.82(AH)

CREST OFFSHORE, INC.

Sheet 6.11 of 37

By C.C. [unclear] Client U.S. NAVY Subject Structural Concrete Analysis
 Date 4-27-82 Job No. 27-271-92 Calculation Sheet 1 of 1 Steel Plate Connection

36-in. Diameter Pipe Piles

BASE SPACING		READ PILE CAPACITY		READ PILE	PILE SPACING P-1	
L	L ₆₁	COMPRESSION	TENSION	Penetration	ΔH	552.7(ΔH)
FT	FT	KIPS	KIPS	FT	FT	LEI
50	54.33	2,450	2,150	242.5	122.5	67,706
55	59.33	2,300	2,000	230.0	110.0	60,797
60	64.33	2,125	1,825	217.5	97.5	53,888
65	69.33	2,000	1,700	207.5	87.5	48,361
70	74.33	1,875	1,575	192.5*	72.5	40,071
75	79.33	1,750	1,450	182.5*	62.5	34,544
80	84.33	1,650	1,350	170.0*	50.0	27,635
85	89.33	1,575	1,275	162.5*	42.5	23,490
90	94.33	1,500	1,200	157.5*	37.5	20,726

Note: L = base spacing at midline

L₆₁ = base spacing at B-D L. line midline

$$(L_{61} = L + 4.33 \text{ ft})$$

ΔH = Pile segment length shown on Pg. 6.10

(ΔH = Read Penetration - 120 ft)

* denotes tension control

by C. Chire Client: U.S. Navy Subject: Structural Concept Analysis
 Date: 1-27-73 Job No. 27-72L-9a Calculation: Structural Steel Connection

32-in. Diameter Pipe Piles

BASE SPACING		REQ'D PILE CAPACITY		REQ'D PILE	PILE SEGMENT P-1	
(l_{sd}	COMPRESSION	TENSION	PENETRATION	ΔH	$600.76(\Delta H)$
FT	FT	KIPS	KIPS	FT	FT	LBS
50	34.69	2,400	2,100	227.5	107.5	64,532
55	39.69	2,600	2,000	217.5	97.5	58,574
60	64.69	2,125	1,825	206.0*	85.0	51,065
65	69.69	2,000	1,700	192.5*	72.5	43,555
70	74.69	1,875	1,550	177.5*	57.5	34,544
75	79.69	1,750	1,450	170.0*	50.0	30,038
80	84.69	1,650	1,350	160.0*	40.0	24,030
85	89.69	1,575	1,275	155.0*	35.0	21,027
90	94.69	1,500	1,200	147.5*	27.5	16,521

Note: (= base spacing at mudline

l_{sd} = base spacing at 5-D below mudline
 ($l_{sd} = l + 4.69$ ft)

ΔH = Pile segmental length shown on Fig. 6-10
 (ΔH = Required Penetration - 120 ft)

* denotes tension control

By S. Charn Client U.S. MTA Subject Structural Concept Study
 Date 4-7-76 Job No 27-771-92 Calculation Structural Steel Pile Design

42-in. Diameter Pipe Piles

BASE SPACING		REQ'D PILE CAPACITY		REQ'D PILE	PILE SEGMENT P-1	
l	l_{64}	COMPRESSION	TENSION	Penetration	ΔH	$642.82(\Delta H)$
FT	FT	KIPS	KIPS	FT	FT	LBS
50	55.05	2,430	2,130	217.5*	87.5	63,260
55	60.05	2,300	2,000	207.5*	87.5	56,772
60	65.05	2,125	1,825	192.5*	72.5	47,039
65	70.05	2,000	1,700	182.5*	62.5	40,531
70	75.05	1,875	1,530	170.0*	50.0	32,441
75	80.05	1,750	1,430	162.5*	42.5	27,575
80	85.05	1,650	1,330	152.5*	32.5	21,087
85	90.05	1,575	1,275	147.5*	27.5	17,843
90	95.05	1,500	1,200	142.5*	22.5	14,533

Notes: l = base spacing at mudline

l_{64} = base spacing at B-D below mudline
 ($l_{64} = l + 5.03$ ft)

ΔH = Pile segment length chosen on Pg. 6-10
 (ΔH = Req'd penetration - 120 ft)

* denotes tension control

CREST OFFSHORE, INC.

Sheet 6.14 of 27

By: G. L. H. L. Client: U. S. H. L. Subject: Structural Concrete
 Date: 4-27-88 Job No: 22-33-22 Calculation: Structural Steel

PILING WEIGHT

(Refer to P. 6.10)

PILE SPACING AT MID-LINE FT	PILING WEIGHT		
	36" O.D.	39" O.D.	42" O.D.
	LBS	LBS	LBS
50	205,547	214,439	225,131
55	193,635	208,431	218,643
60	191,729	200,922	208,910
65	186,202	193,412	202,422
70	177,512	184,401	194,312
75	172,383	179,895	189,446
80	165,476	173,887	182,958
85	161,321	170,884	179,714
90	158,567	166,378	176,460

By C. Chao Client U.S. NAVY Subject Steel J. Concept Review
 Date 4-5-76 Job No. 22-721-24 Calculation Steel J. Steel Wt. Value

(IV) TOTAL WEIGHT OF STRUCTURE

$$W_T = W_P + W_J + W_S + W_M \quad (1)$$

where W_T = Total Weight of Structure

W_P = Weight of Piling

W_J = Weight of Jacket

W_S = Weight of Superstructure

W_M = Weight of Miscellaneous Items,
 such as boat landing, walkway, etc.

Assuming that the superstructure and the miscellaneous items can be designed in the same amount of steel weight regardless of the change in jacket base spacing, i.e.,

$$W_S + W_M = \text{Constant} \quad (2)$$

Subtracting Eq. (2) from both sides of Eq. (1), it gives

$$W = W_P + W_J \quad (3)$$

where W = weight of piling and jacket

CREST OFFSHORE, INC.

Sheet 6.16-27

By C. Clark Client U.S. Navy Subject Structural Design for Jacket
 Date 4-27-76 Job No. 27-771-92 Calculation Structural Steel Wt. Determination

One-third weight of W (Eq. 3) is added to the sum
 the weights shown in Pigs 6.07, 6.09 and 6.14.

36 - IN. DIAMETER PILING

BASE SPACE AT MIDLINE	WEIGHT			
	JACKET		PILING	TOTAL
	LEG	BRACES		
FT	LBS	LBS	LBS	LBS
50	53,375	45,035	205,547	284,465
55	"	50,256	193,633	282,730
60	"	55,510	191,729	251,125
65	"	67,739	186,402	237,807
70	"	73,652	177,712	255,450
75	"	74,588	172,580	235,559
80	"	94,319	166,375	293,681
85	"	100,905	161,331	236,122
90	"	107,512	158,767	265,965

CREST OFFSHORE, INC.

Sheet 617 of 71

By: C. Chern Client: U.S. NAVY Subject: Station Concept Analysis
 Date: 8-28-76 Job No.: 27-271-11 Calculation: Station Stability Variation

39-IN. DIAMETER PILING

BASE SPACE AT MUDLINE	WEIGHT			
	JACKET		PILING	TOTAL
	LEG	BRACES		
FT	LBS	LBS	LBS	LBS
50	37,438	45,035	214,439	296,912
55	"	50,256	208,431	298,125
60	"	55,510	202,922	298,870
65	"	67,739	193,412	297,359
70	"	73,652	184,421	294,491
75	"	79,588	179,893	295,921
80	"	94,319	173,837	304,644
85	"	100,905	170,632	308,227
90	"	107,512	165,902	310,528

CREST OFFSHORE, INC.

Sheet 6-15 of 27

by C. C. Lamm Client U.S. Navy Subject Structural Concept Analysis
 Date 1-27-76 Job No. 27-2-1-1 Calculation Structural Steel Deck

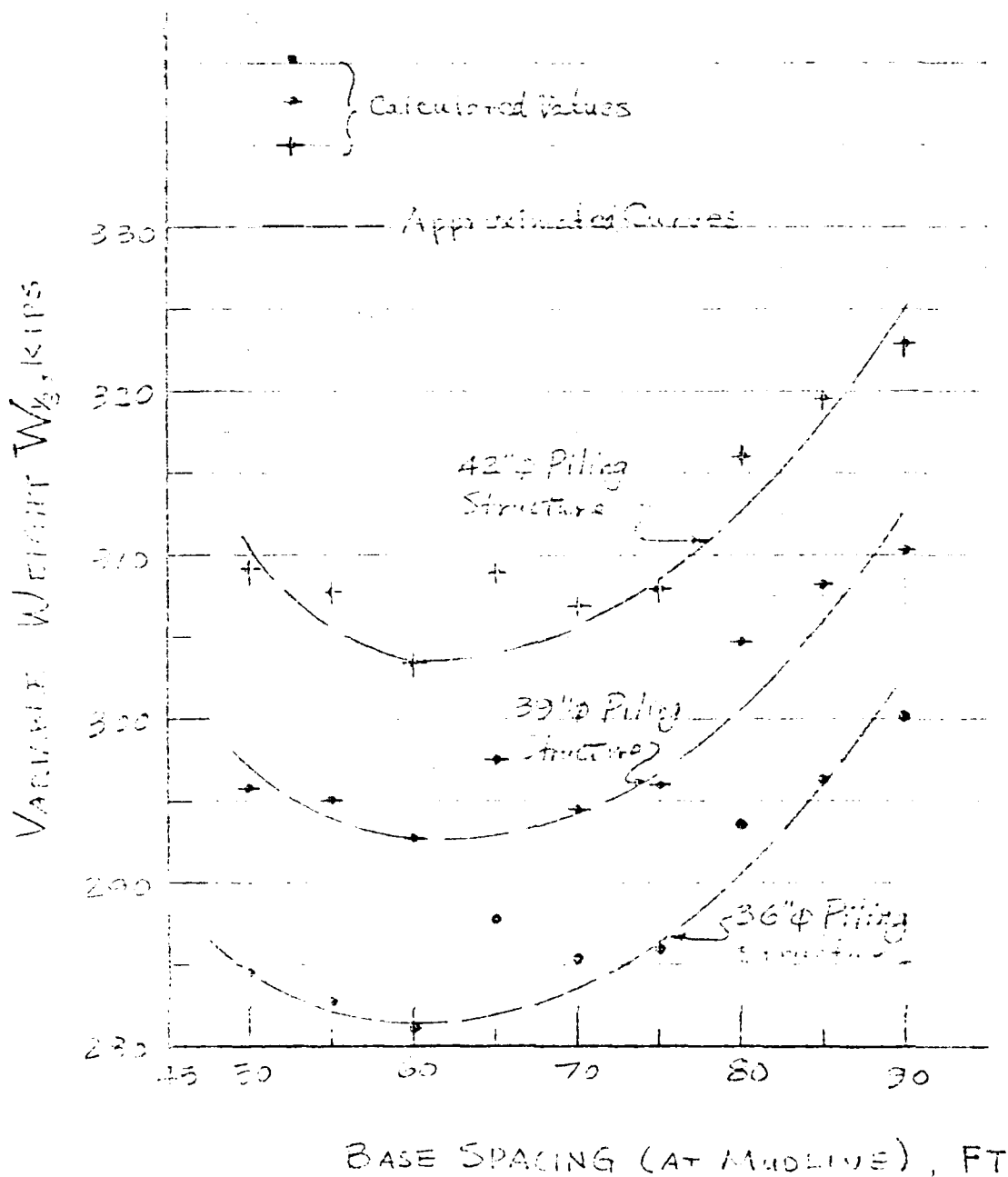
42 - IN. DIAMETER PILING

BASE SPAC'G AT MUDLINE	WEIGHT			
	JACKET		PILING	TOTAL
	LEG	BRACES		
FT	LBS	LBS	LBS	LBS
50	33.35	45,035	228,131	309,155
55	"	50,256	215,643	307,883
60	"	55,510	203,910	303,409
65	"	67,739	192,422	309,160
70	"	73,652	184,312	306,953
75	"	79,588	180,446	305,023
80	"	94,319	182,338	316,266
85	"	100,905	178,114	319,012
90	"	107,512	173,460	322,961

CREST OFFSHORE, INC.

Sheet 6 of 27

21 C. S. 1976 Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-22-76 Job No. 22-771-92 Calculation Structural Stability Variation



By C. C. Baker, Chief U.S. Navy Subject Structural Concept for pile (p-1)
 Date 11-1-72 Job No. 27-171-72 Calculation Struct. Allow. Pile Vibration

Revised in Accordance with Graph shown on Pg. 5-14

36 - IN. Diameter Pipe Piles

EACH PILE	READ PILE CAPACITY		READ PILE PENETRATION	PILE SELECTION P-L	
	COMPRESSION	TENSION		ΔH	552.7(ΔH)
FT	KIPS	KIPS	FT	FT	LBS
50	2,075	1,700	212.5	92.5	51,125
55	1,900	1,550	192.5*	72.5	40,071
60	1,750	1,400	175.0*	55.0	30,399
65	1,650	1,275	162.5*	42.5	23,490
70	1,550	1,175	155.0*	35.0	19,345
75	1,450	1,100	147.5*	27.5	15,199
80	1,375	1,025	140.0*	20.0	11,054
85	1,300	950	135.0*	15.0	8,291
90	1,250	900	132.5*	12.5	6,909

Notes: $\Delta H = (\text{pilot Penetration} - 120 \text{ ft})$

Pg. 6-10

* denotes tension control

CREST OFFSHORE, INC.

Sheet 6-21 of 21

By C. Cherr Client U.S. NAVY Subject Structural Concept Analysis (3-pile)
 Date 5-12-76 Job No. 27-771-92 Calculation Structural Steel Wt. Variation

Revised in Accordance with Graph shown on Pg 5.14

39 - IN. Diameter Pipe Piles

BASE SPAC'G	REQ'D PILE CAPACITY		REQ'D PILE PENETRATION	PILE SEGMENT P-1	
	COMPRESSION	TENSION		ΔH	$600.76(\Delta H)$
FT	KIPS	KIPS	FT	FT	LBS
50	2,075	1,700	192.5*	72.5	43,553.
55	1,900	1,550	177.5*	57.5	34,344.
60	1,750	1,400	165.0*	45.0	27,034.
65	1,650	1,275	155.0*	35.0	21,027.
70	1,550	1,175	145.0*	25.0	15,019.
75	1,450	1,100	140.0*	20.0	12,015.
80	1,375	1,025	135.0*	15.0	9,011.
85	1,300	950	130.0*	10.0	6,008.
90	1,250	900	125.0*	5.0	3,004.

Notes: $\Delta H = (\text{Req'd Penetration} - 120 \text{ ft})$

Pg. 6-10

* denotes tension control

CREST OFFSHORE, INC.

Sheet 6-22 of 27

By C. Chern Client U.S. NAVY Subject Structural Concept Analysis (3-pile)
 Date 5-12-76 Job No 27-771-92 Calculation Structural Steel Wt. Variation

Revised in Accordance with Graph shown on Pg 5.14

42 - IN. Diameter Pipe Piles

BASE SPACING	REQ'D PILE CAPACITY		REQ'D PILE PENETRATION	PILE SEGMENT P-1	
	COMPRESSION	TENSION		ΔH	$643.32(\Delta H)$
FT	KIPS	KIPS	FT	FT	LBS
50	2,075	1,700	182.5*	62.5	40,351.
55	1,900	1,550	167.5*	47.5	30,819.
60	1,750	1,400	157.5*	37.5	24,331.
65	1,650	1,275	147.5*	27.5	17,843.
70	1,550	1,175	140.0*	20.0	12,976.
75	1,450	1,100	135.0*	15.0	9,732.
80	1,375	1,025	130.0*	10.0	6,488.
85	1,300	950	125.0*	5.0	3,244.
90	1,250	900	120.0*	0	0.

Notes: $\Delta H = (\text{Req'd Penetration} - 120 \text{ ft})$

Pg. 6-10

* denotes tension control

By C. Chera, Client U.S. NAVY Subject Structural Concept Analysis (3rd Ed)
 Date 5-12-76 Job No 27-771-92 Calculation Structural Steel Wt Variation

PILING WEIGHT (REVISED)

(Refer to Pg. 6.10)

BASE SPACING AT MUD LINE	PILING WEIGHT		
	36" O.D.	39" O.D.	42" O.D.
FT	LBS	LBS	LBS
50	122,966	193,412	202,422
55	177,912	184,401	192,690
60	166,240	176,891	186,202
65	161,331	170,854	179,714
70	157,186	164,876	174,847
75	153,040	161,872	171,603
80	148,895	158,868	168,359
85	144,132	155,863	165,115
90	144,750	152,861	161,871

CREST OFFSHORE, INC.

Sheet 624 of 27

By C. Chinn Client H. S. W. / Project Structure Concept Analysis (P-10)
 Date 11/2/78 Job No. 111111 Calculation Structure 54.74t. 11.11.11

W_{1/2}

36 - IN. DIAMETER PILING

BASE SPACE AT MAX. LOAD	WEIGHT			
	JACKET		PILING	TOTAL
	LEG	BRACES		
FT	LBS	LBS	LBS	LBS
50	37,886	45,035	182,966	267,887
55	"	50,236	177,912	262,054
60	"	55,510	168,240	237,636
65	"	67,739	161,331	262,956
70	"	73,652	157,186	264,724
75	"	79,348	153,040	266,514
80	"	94,317	143,895	277,100
85	"	100,903	146,132	280,923
90	"	107,512	144,750	283,143

CREST OFFSHORE, INC.

Sheet 622 of 27

By C. Chern Client U.S. Navy Subject Structural Concept Analysis (3-pile)
 Date 5-10-76 Job No 27-771-96 Calculation Structural Steel Wt Variation

W_{1/3}

39" IN. DIAMETER PILING

BASE SPACE AT Mud LINE	WEIGHT			
	JACKET		PILING	TOTAL
	LEG	BRACES		
FT	LBS	LBS	LBS	LBS
50	36,485	45,035	193,412	274,932
55	"	50,256	184,401	271,047
60	"	55,510	176,891	268,839
65	"	67,739	170,884	275,061
70	"	73,652	164,376	274,966
75	"	79,588	161,872	277,898
80	"	94,319	159,868	289,625
85	"	100,905	155,365	293,208
90	"	107,512	152,861	296,811

CREST OFFSHORE, INC.

Sheet 626 of 27

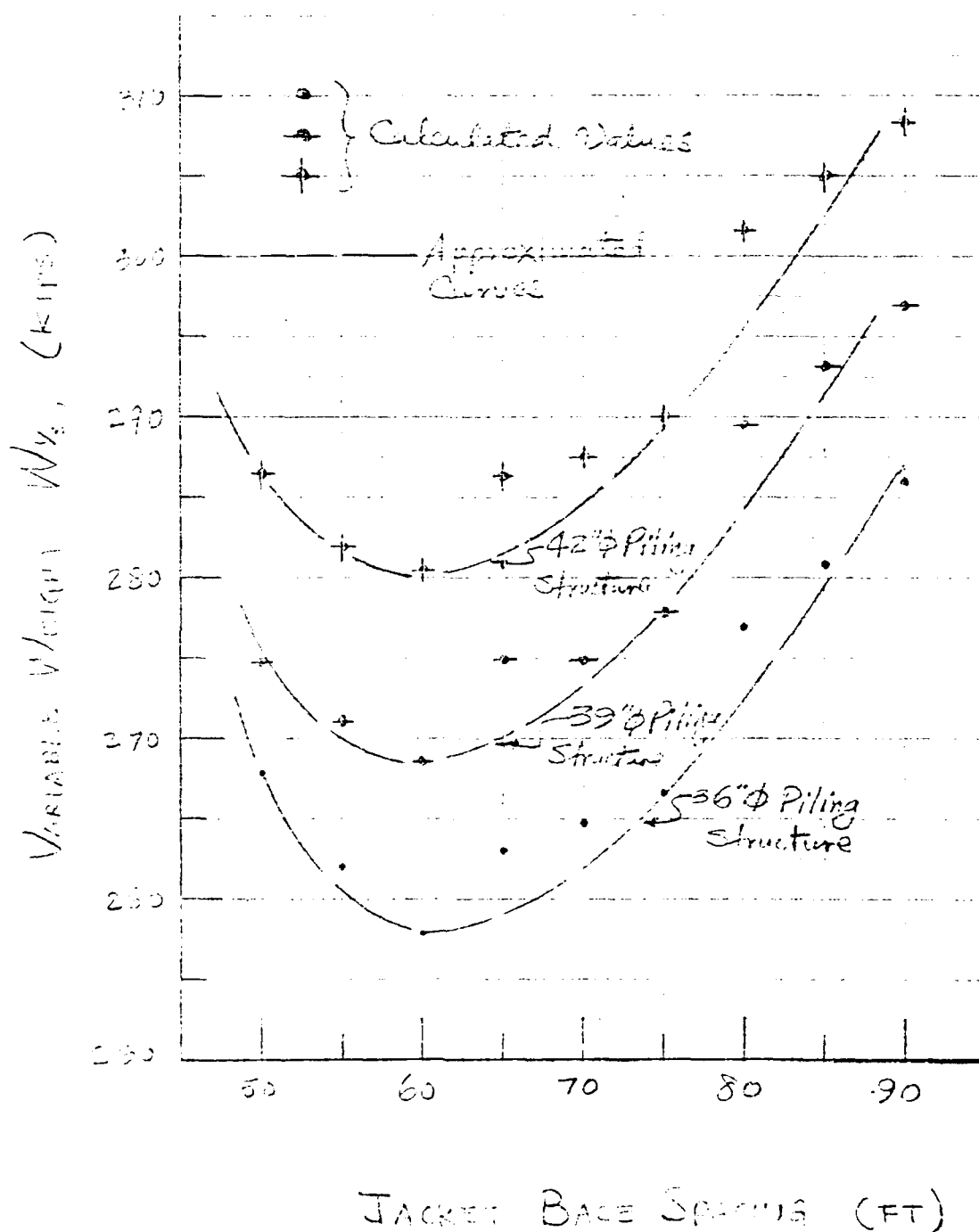
By C. Cherry Client H. S. Noy Subject Structural Concept Analysis (3-pile)
 Date 5-10-76 Job No. 1111-96 Calculation Structural Static Variation

W_{1/3}

42-IN. DIAMETER PILING

BASE SPACE AT Mud LINE	WEIGHT			
	JACKET		PILING	TOTAL
	LEG	BRACES		
FT	LBS	LBS	LBS	LBS
50	33,929	45,035	202,422	286,446
55	"	50,256	192,690	281,935
60	"	55,510	186,202	280,701
65	"	67,739	179,714	286,442
70	"	73,652	174,847	287,488
75	"	79,588	171,603	290,180
80	"	94,319	168,559	301,667
85	"	100,905	165,113	305,009
90	"	107,512	161,871	308,372

By C. C. [unclear] Client G. C. [unclear] Subject Structural Concept Analysis of [unclear]
 Date 5-19-72 Job No 27-721-24 Calculation Structural Steel Designation



SECTION 7

STRUCTURAL CONFIGURATION

7.1 INTRODUCTION

Set forth herein is the conceptual configuration for the three-pile structure. This configuration was selected primarily on the basis of weight optimization as presented previously.

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Sheet 7.02 of 16

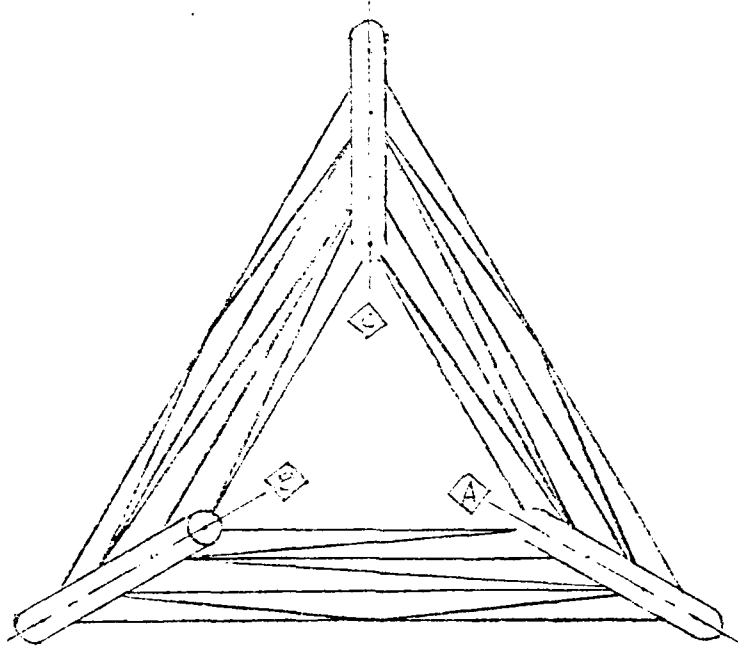
By P. J. [illegible] Client U.S. [illegible] Subject Structural Concept Analysis
Date 4-29-76 Job No. 27-171-91 Calculation Structural Configuration

6.2 PLANS AND ELEVATIONS

By C. C. Lee Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-2-73 Job No. 27-771-92 Calculation Structural Configuration

KEY PLAN

SCALE : $\frac{1}{16}'' = 1'-0''$



by C. Schaefer Client L.S. MAYZ

Subject: Language Concept Analysis

Date 4-2-76

Job No. 27-271-92

Calculation Structural Configuration

MARKET ELEVATION

(TRUE BATTER 1:6)

(AFTER = 6.931)

Row

◆—◆

4A-5

W.R. EL-16-6'

$$200 = 25x + 10y$$

95-412-2

EL 0451

$$r = 20 + 2 \cdot \left(\frac{100.5}{6} \right) \cos 30^\circ$$

$$= 27 \div 29.012$$

$$= 55.012 \%$$

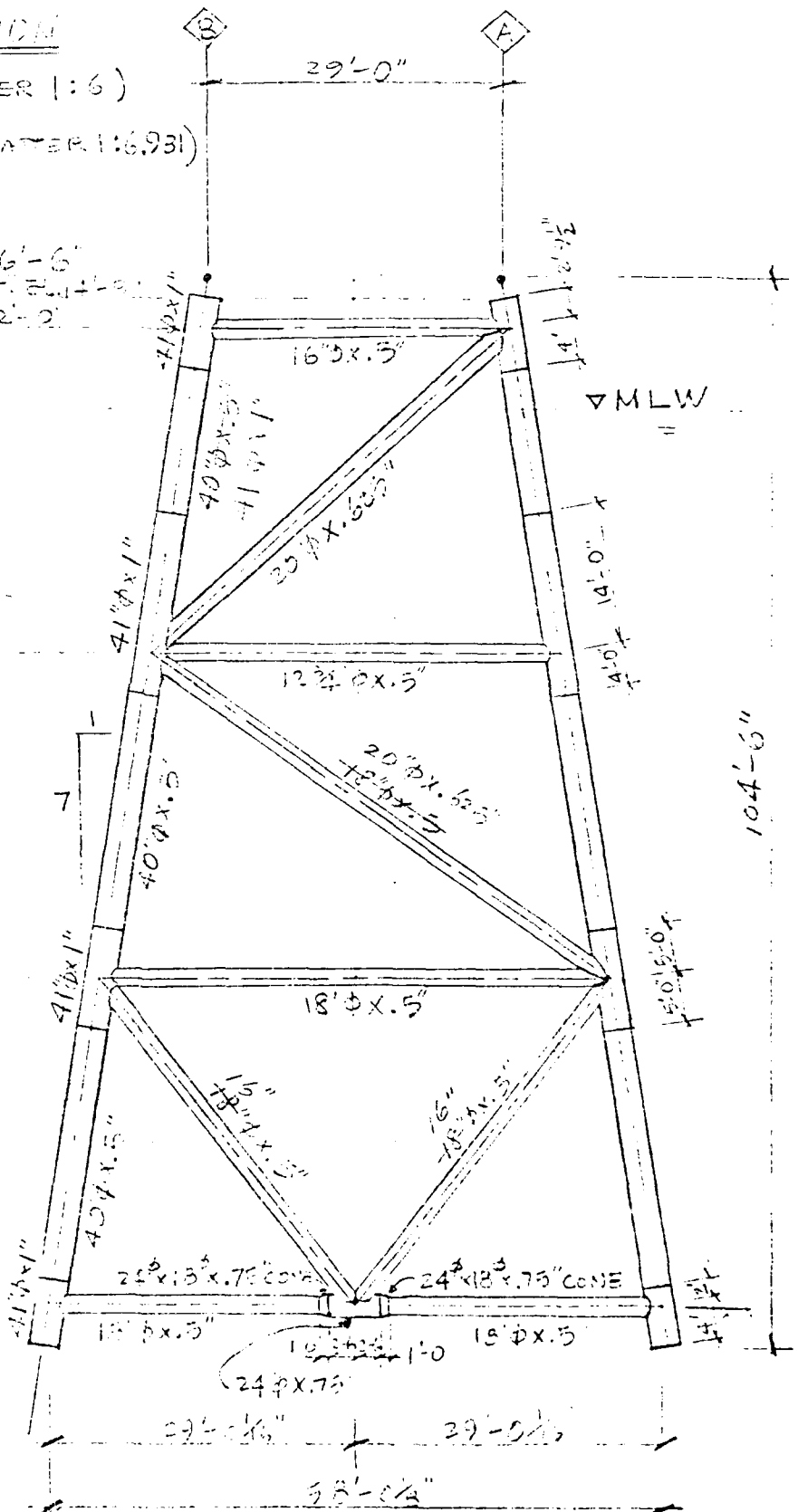
$$= 65' - 0\frac{1}{8}" \quad \text{---} \quad \text{E.L.G.) } 20'-0"$$

FILE (-) 52'-0"

1. Line BL (-) 84'-2"

601.01 5-T. EL 93-01

Some $k_0'' = 1.0''$



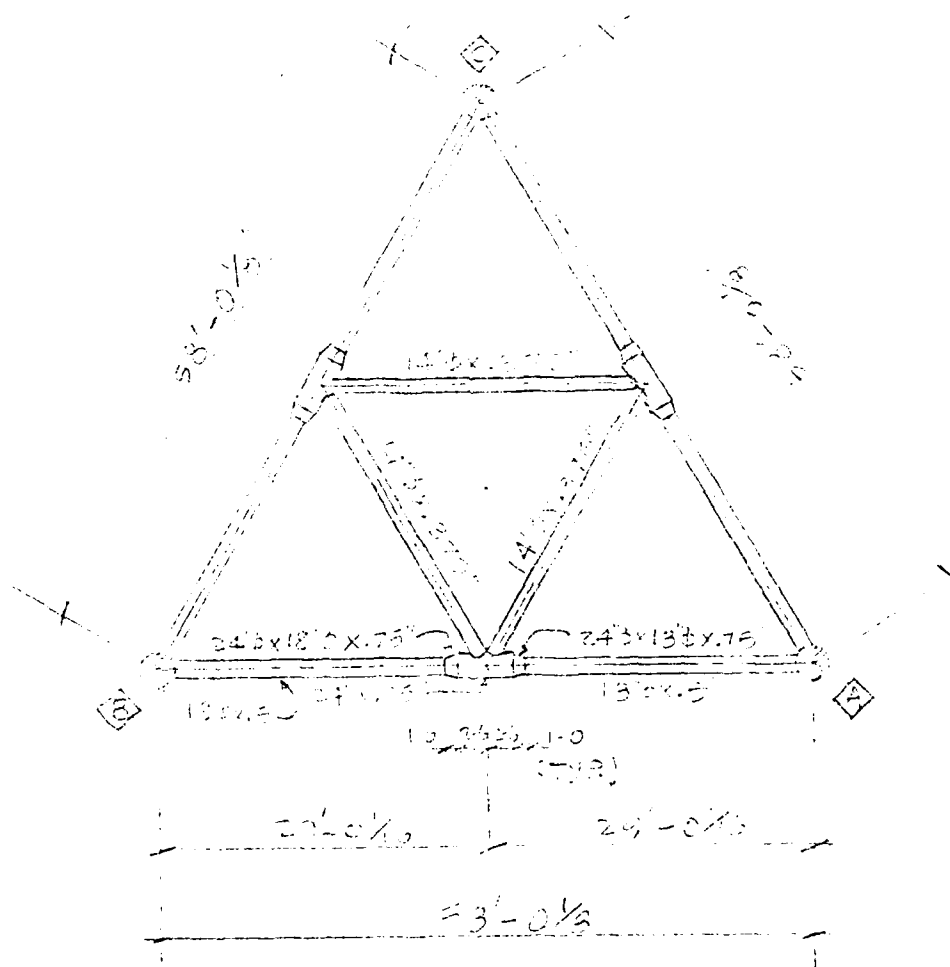
CREST OFFSHORE, INC.

Sheet 722 of 16

by C. S. [illegible] Client U.S. NAVY Subject Structural Support Analysis
Date 4-7-74 Job No. 27-721-92 Calculation Structural Configuration

Date 4-2-92 Job No. 27-77-92 - Calculation Structural Configuration

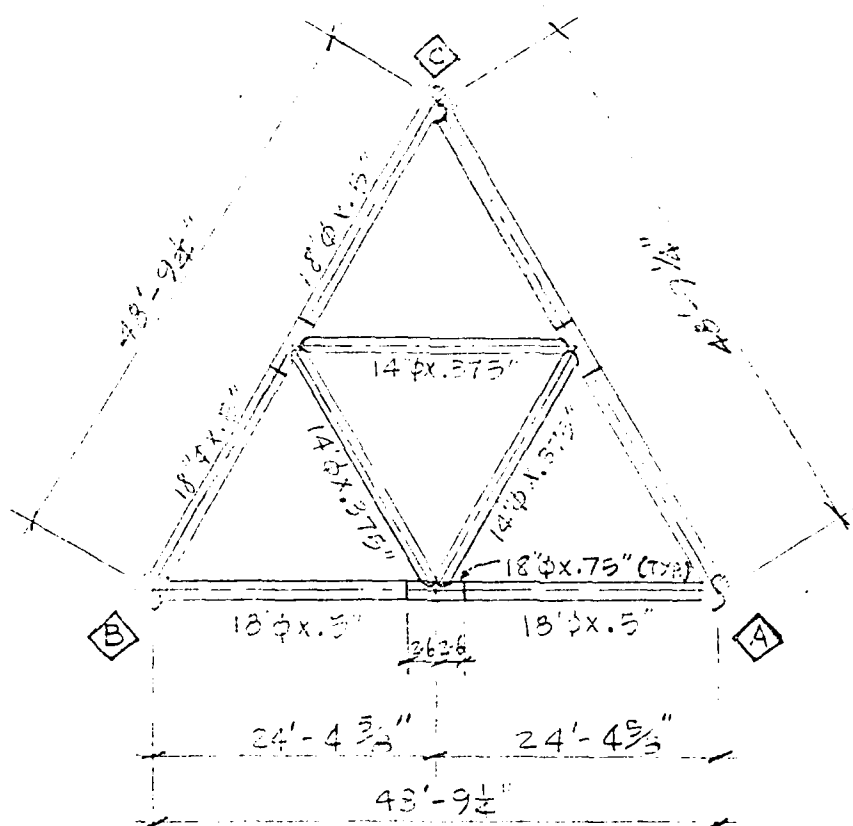
44) 0 ELA 94-97

$$\text{ScA} = \frac{1}{15} = 0.0667$$


By J. Chou Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-6-76 Job No 27-171-92 Calculation Structural Configuration

PLAN @ EL. (+) 52'-0"

SCALE 1/16" = 1'-0"



$$* L = 29 + 2 \cdot \left(\frac{63.5}{6} \right) \cos 30^\circ$$

$$= 29 + 19.7742$$

$$= 48'-9 \frac{1}{4}"$$

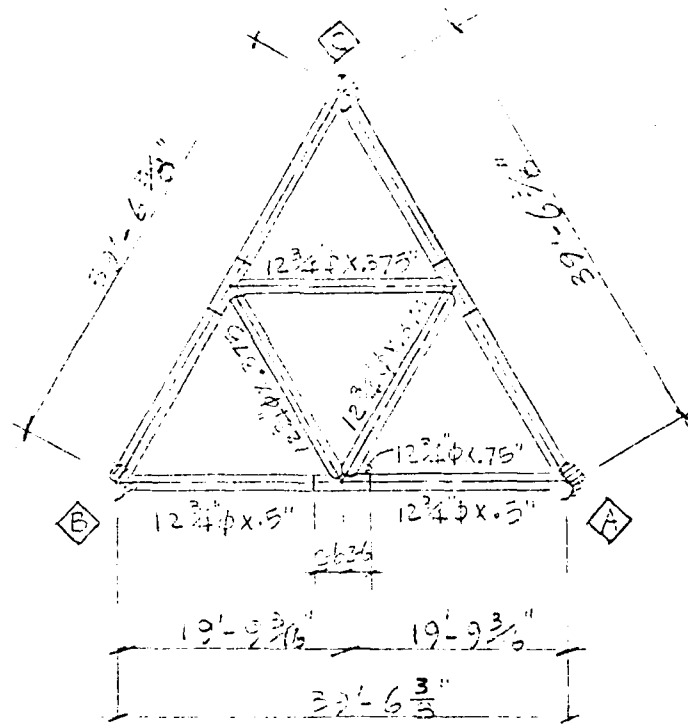
CREST OFFSHORE, INC.

Sheet 2 of 16

By C. S. ... Client U.S. Navy Subject Structural Concept Development
 Date 4-6-76 Job No. 27-211-74 Calculation Structural Configuration

PLAN @ EL. 20'-0"

SCALE = $\frac{1}{8}" = 1'-0"$



$$\begin{aligned} * & (20.9 + 2 \left(\frac{26.75}{6} \right) \cos 30^\circ) \\ & = 20.9 + 10.3065 \\ & = 32'-6 \frac{3}{8}" \end{aligned}$$

by Bill Date 11/13/84

Subject Steel Truss Concept for well

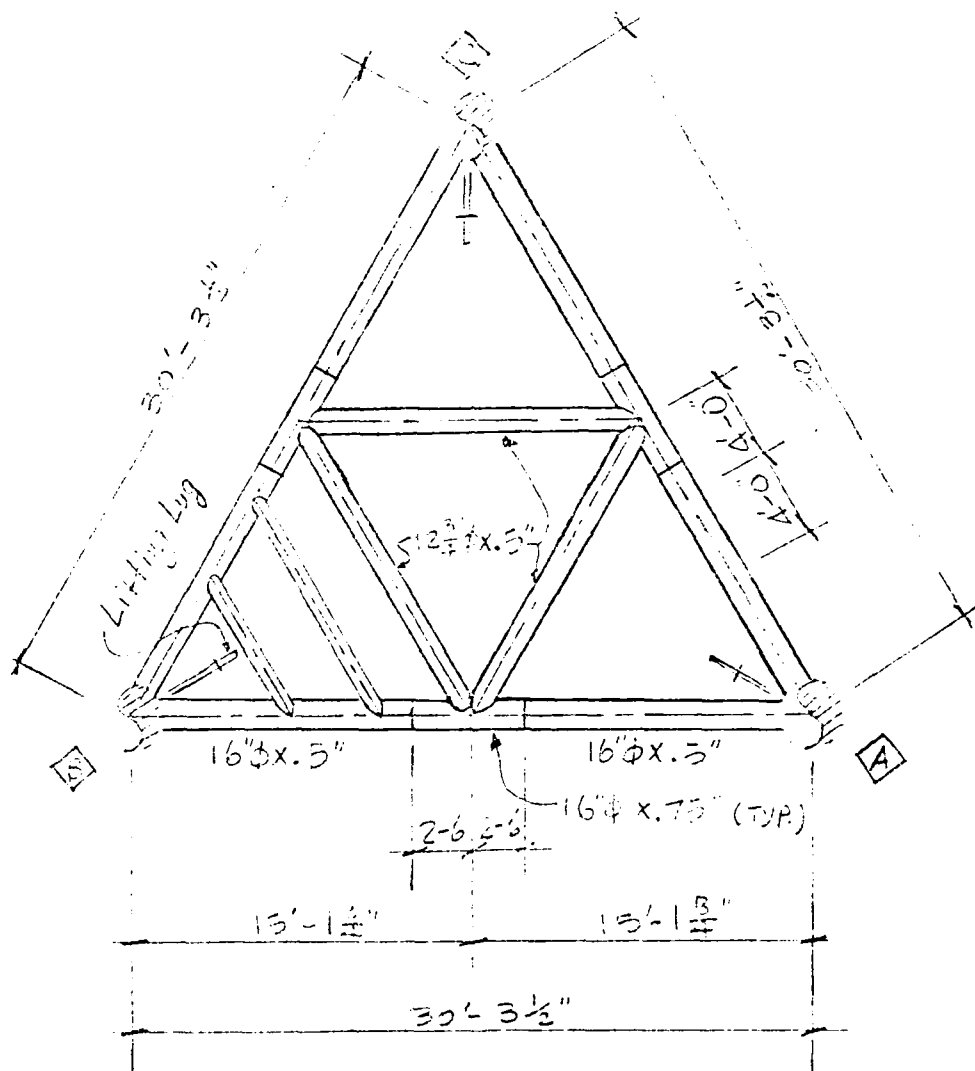
Date 11/13/84 Job No 22-11-1

Calculation Structural Calculations

PLAN OF EL. (+) 12'-0"

(TOP OF ALL PIPE EL. (+) 12'-0")

SCALE $\frac{1}{4} = 1'-0"$



$$* L = 29 + 2 \left(\frac{1}{2} \right) \cos 30^\circ$$

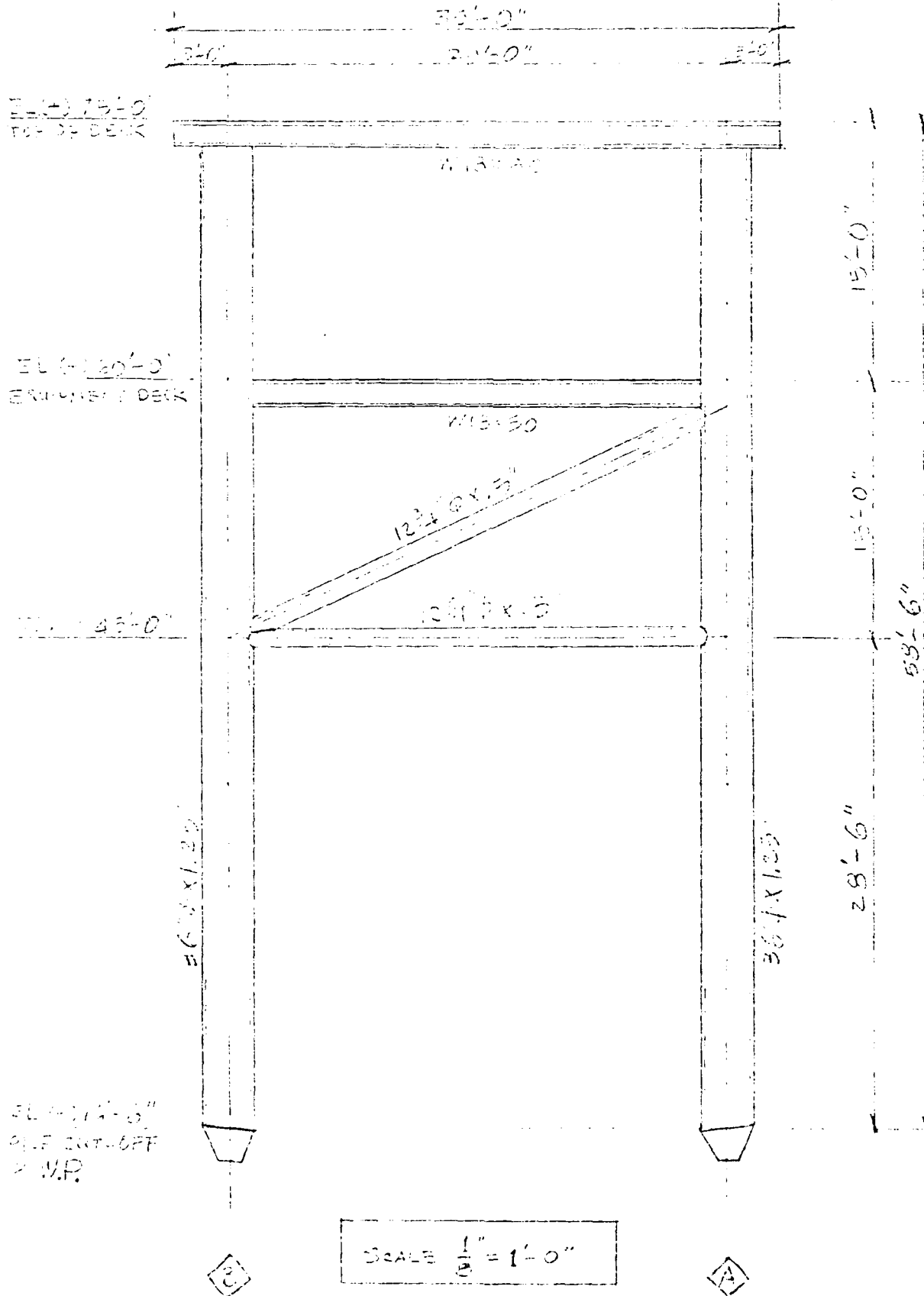
$$= 29 + 1.73$$

$$= 30'-3 \frac{1}{2}"$$

CREST OFFSHORE, INC.

Sheet 7-20 of 16

By C. C. [illegible] Client U. S. Navy Subject Structural Concept/Analysis
 Date 1-27-72 Job No. 271-92 Calculation Structural Configuration

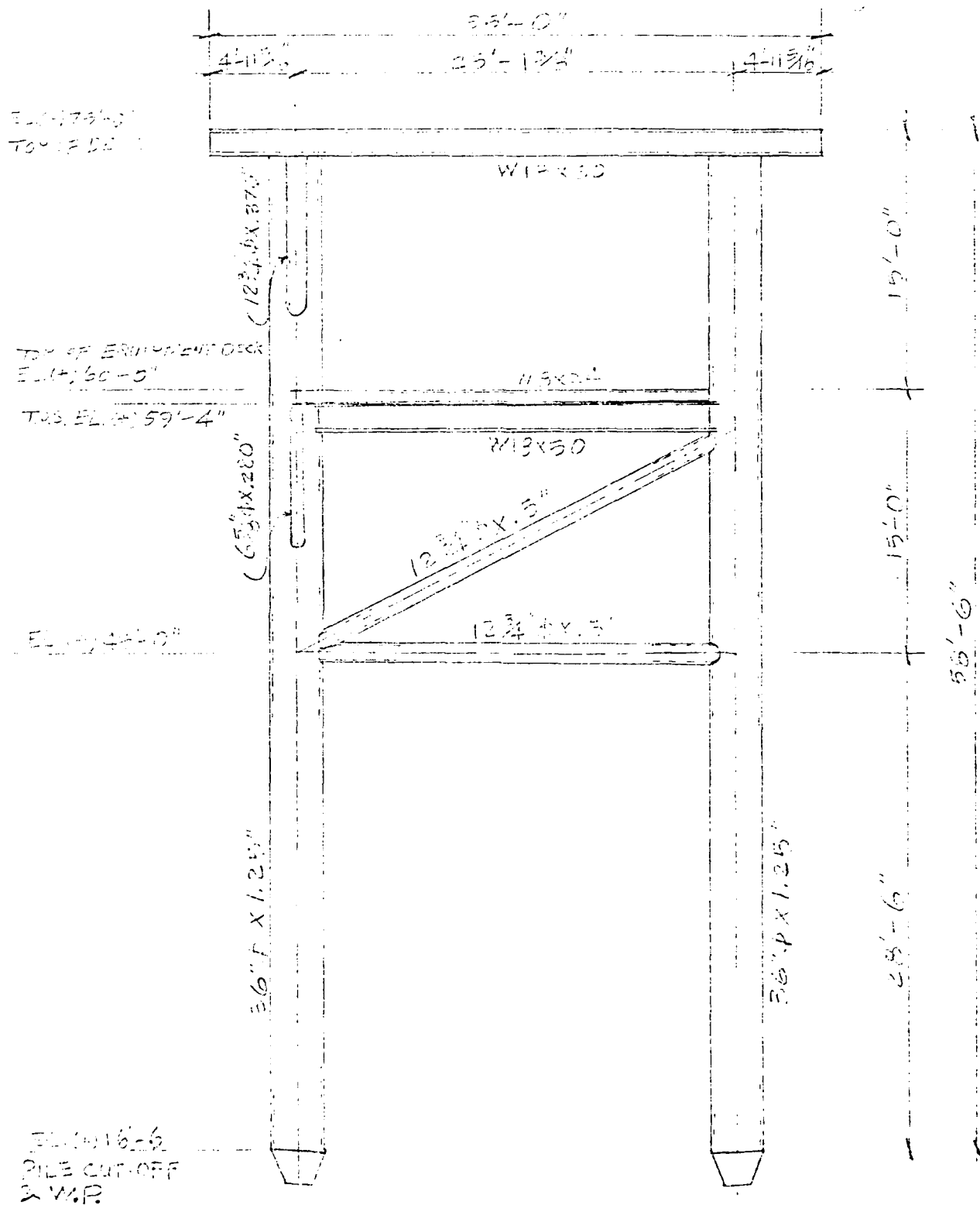


SCALE $\frac{1}{8}'' = 1'-0''$

CREST OFFSHORE, INC.

Sheet 7.12 of 13

By C. Chen Client U.S. NAVY Subject Struct. Concept Analysis
 Date 1-27-76 Job No. 20-12-72 Calculation Struct. Configuration

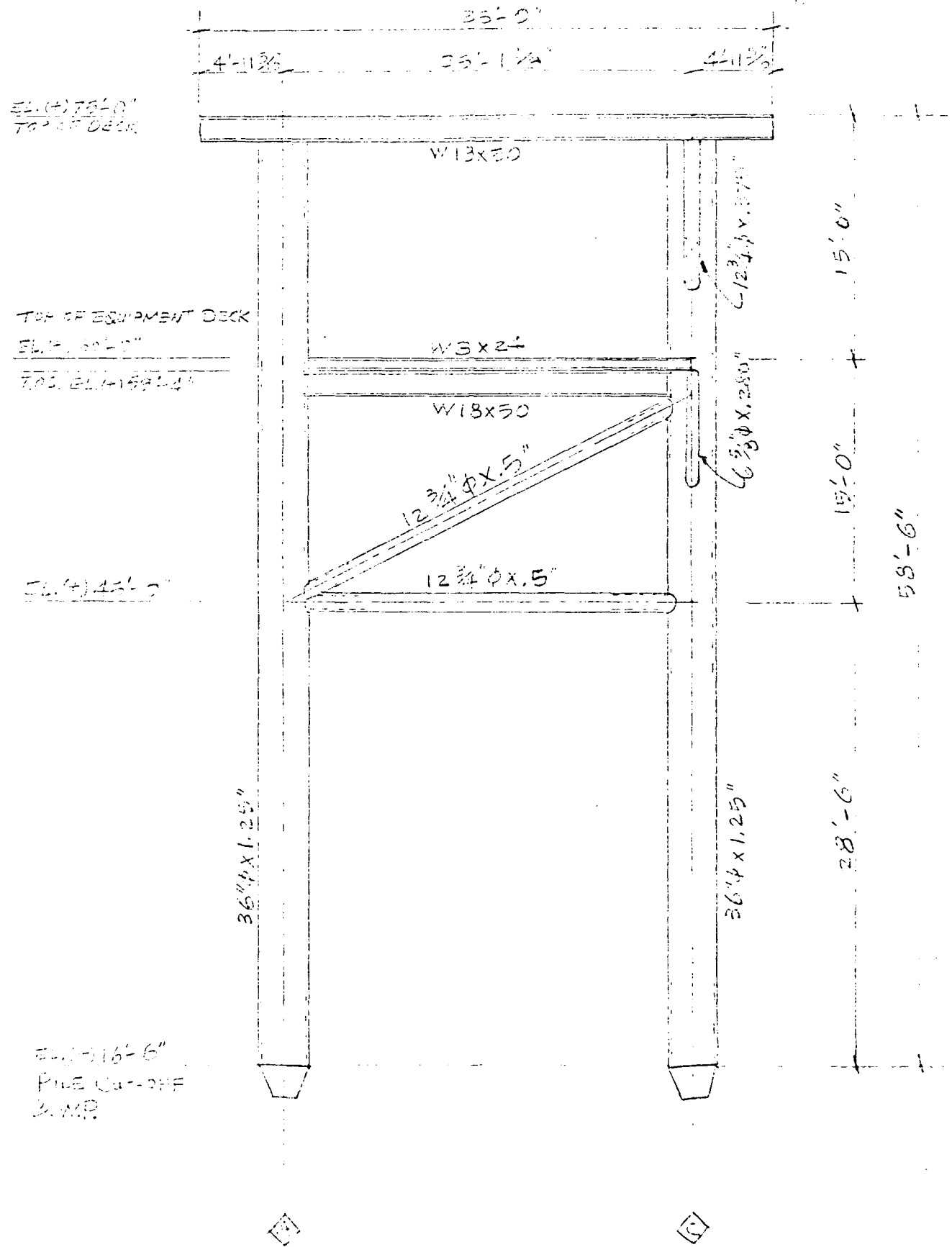


*20.078' = 23.115'
 = 25'-1 3/8"

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Sheet 7.11 of 16

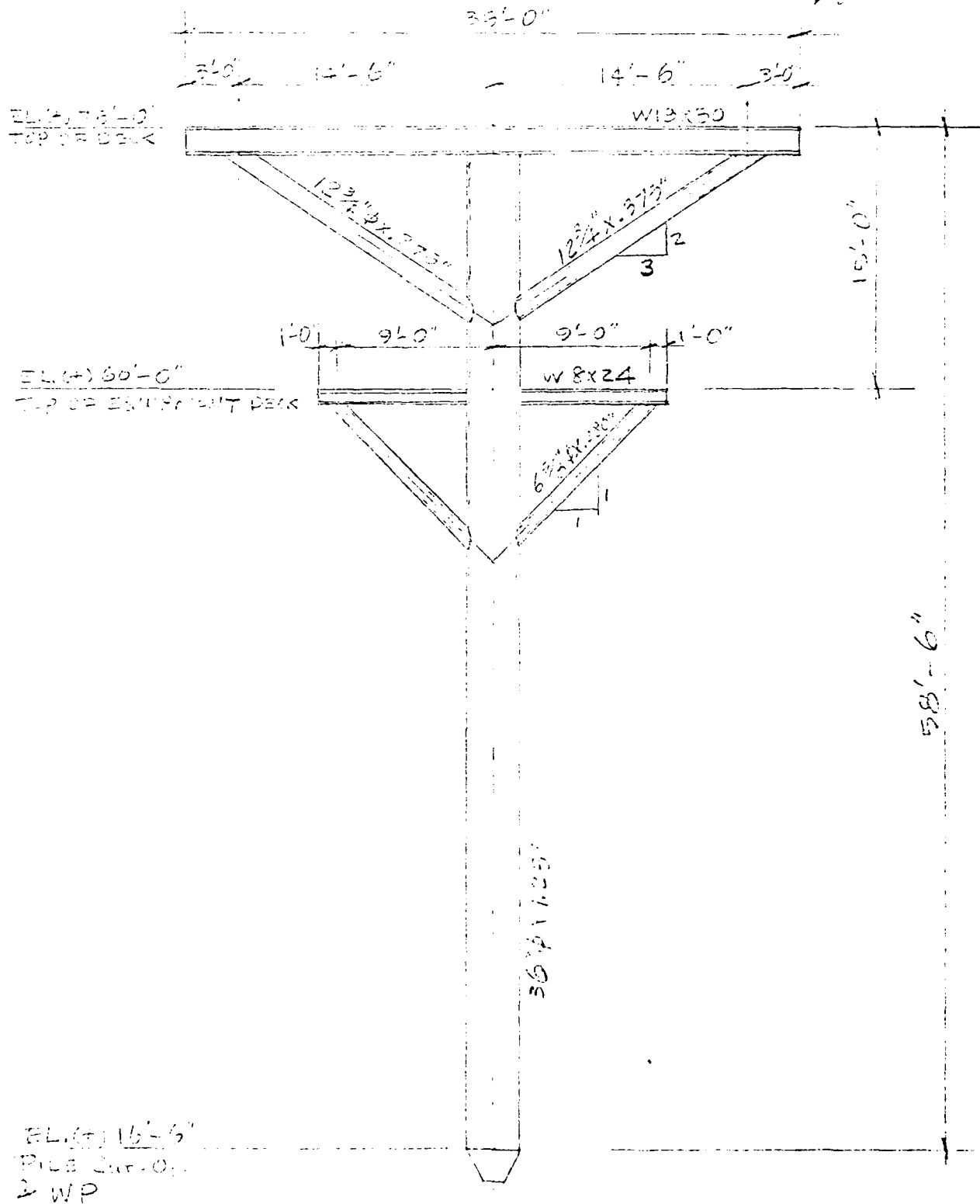
By W. L. C. Client U.S. NAVY Subject Struct. & Conceptual Design
 Date 4-2-76 Job No. 27-721-22 Calculation Struct. & Conceptual Design



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Sheet 7.12 of 12

By SAUL L. LEE Client OFFSHORE Subject STRUCTURAL ANALYSIS
 Date 11-1-77 Job No. 11-1-77 Calculation Structural Configuration



(C)

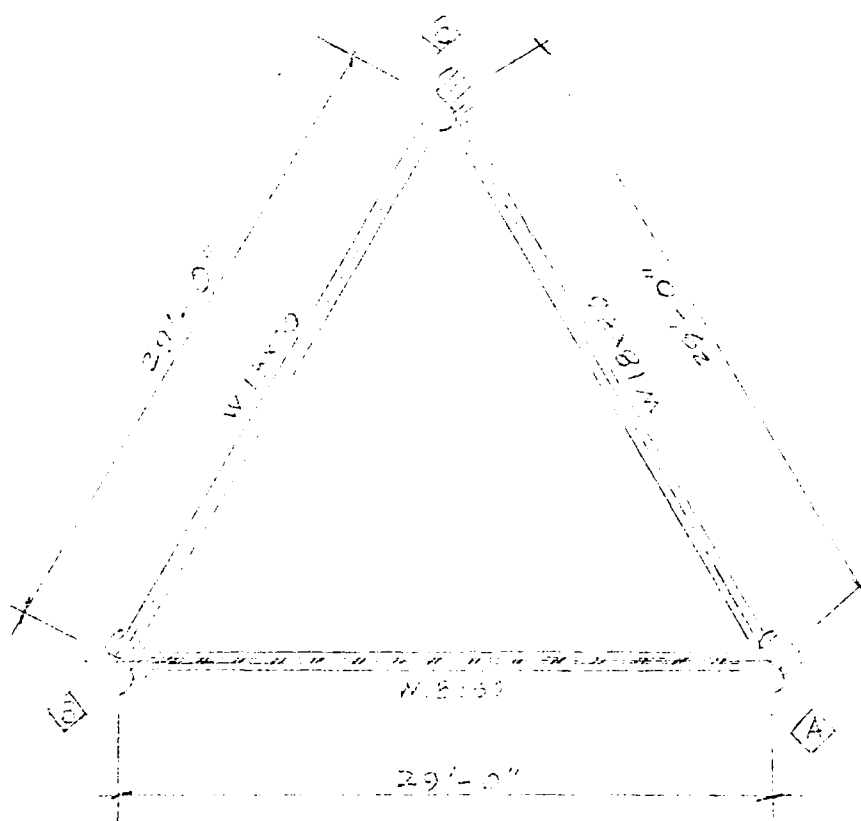
CREST OFFSHORE, INC.

Sheet 7.13 of 11

By, C. Chock Client, 1624477 Subject, Shiplift Concept Analysis
 Date, 4-2-78 Job No. 27771-92 Calculation, Structural Configuration

PLAN @ EL. (+) 59'-4"

Scale = $\frac{1}{32}'' = 1'-0''$



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Sheet 746 of 16

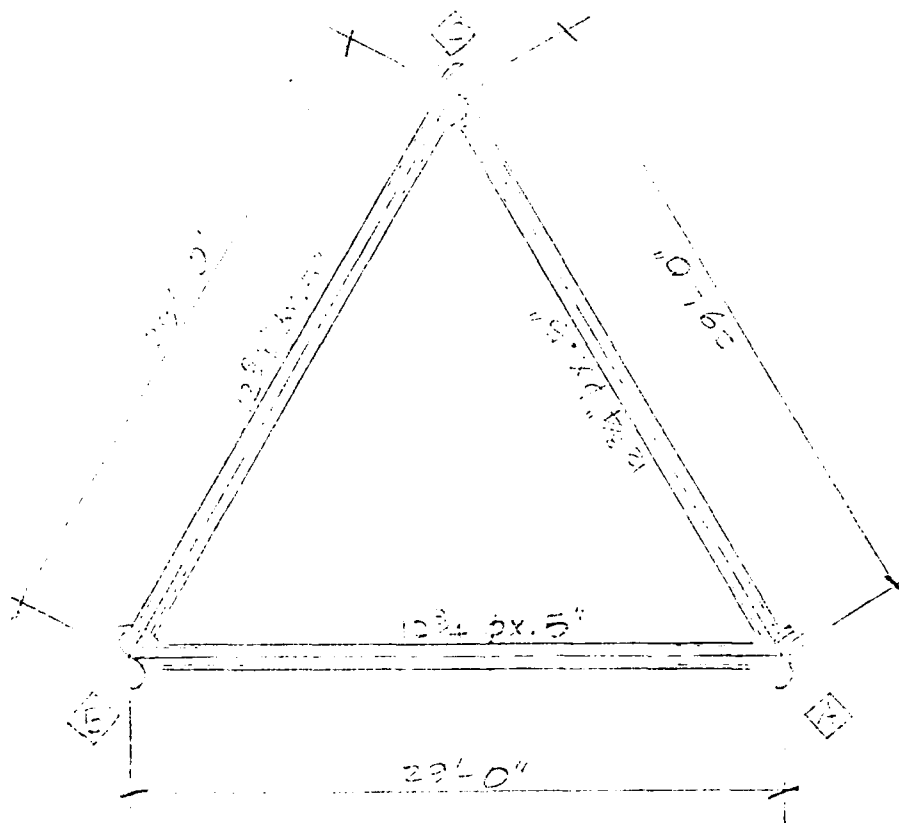
by S. Chan Client U.S. NAVY

Subject Structural Concept Analysis

Date 4-6-75 Job No. 27-771-24

Calculation Structural Configuration

PLAN @ EL(+) 45'-2"



SECTION 8
STRUCTURAL IDEALIZATION

8.1 INTRODUCTION

The material within this section establishes the mathematical idealization of the three-pile structural concept. This material consists of joint coordinates, member locations, member sizes and location of reactions.

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Sheet 2.02 of 17

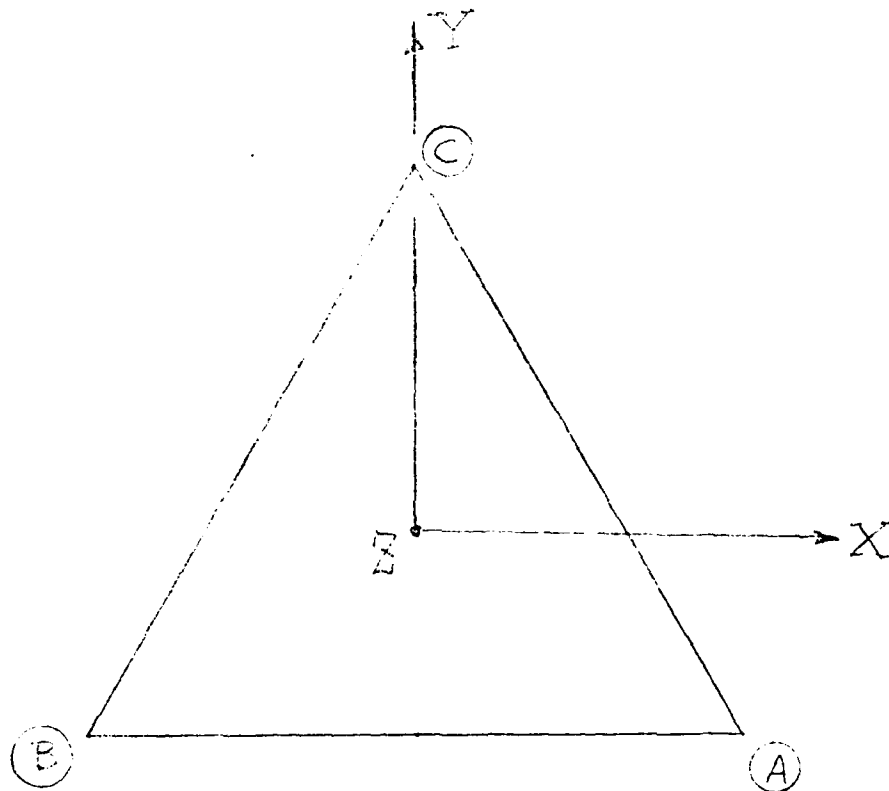
By C. C. Brown Client U.S. NAVY Subject Structural Concrete Analysis
Date 4-29-76 Job No. 27-771-23 Calculation Structural Investigation

8.2 PLANS AND ELEVATIONS

by C. Chinn Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-8-76 Job No. 27-721-92 Calculation Structural Identification

KEY PLAN

Scale $\frac{1}{16}'' = 1'-0''$

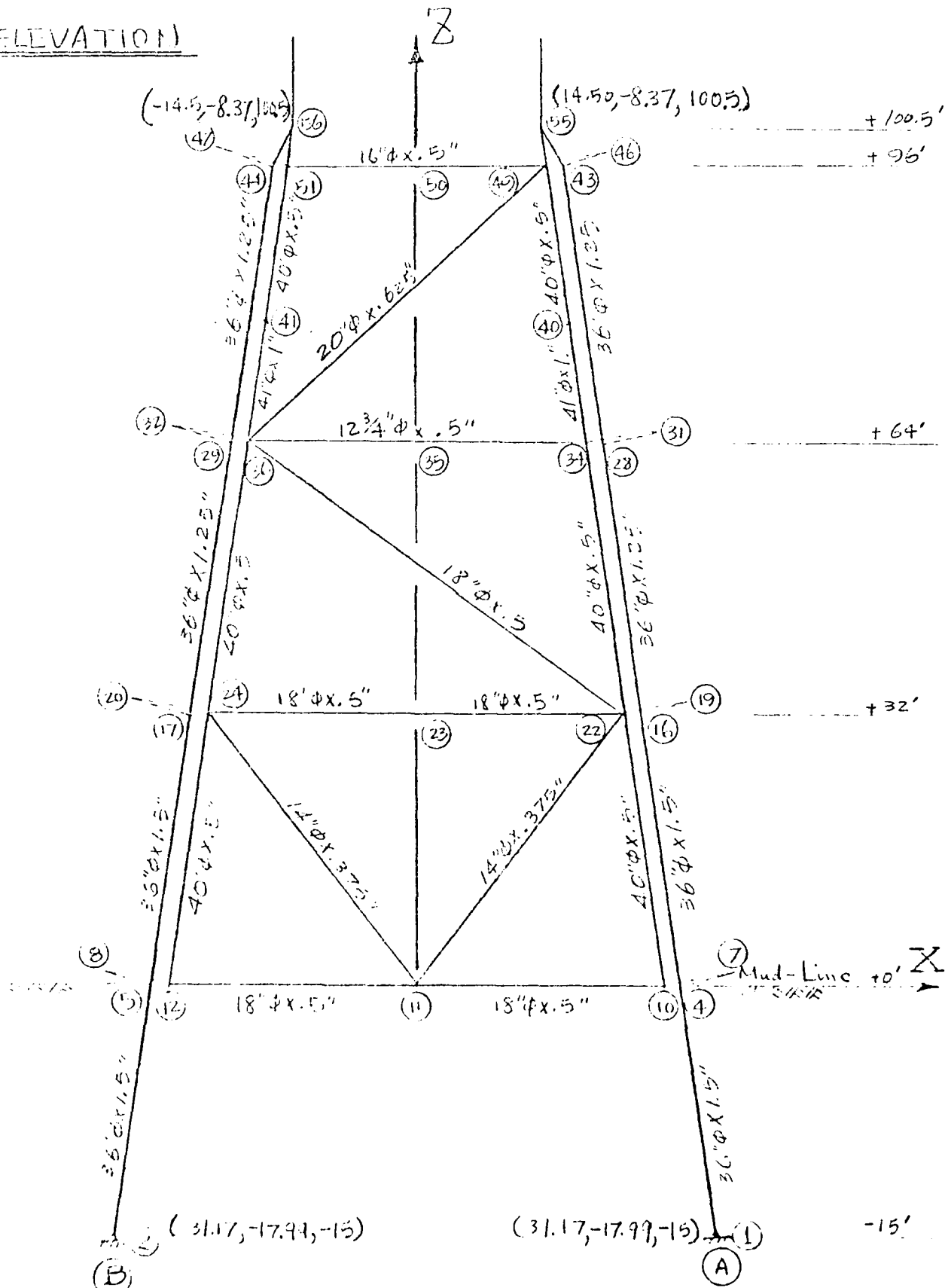


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Sheet 2.2.4 of 12

By C. Chen Client U.S. Navy Subject Structural Concept Analysis
 Date 4-2-76 Job No. 27-771-21 Calculation Structural Idealization

ELEVATION

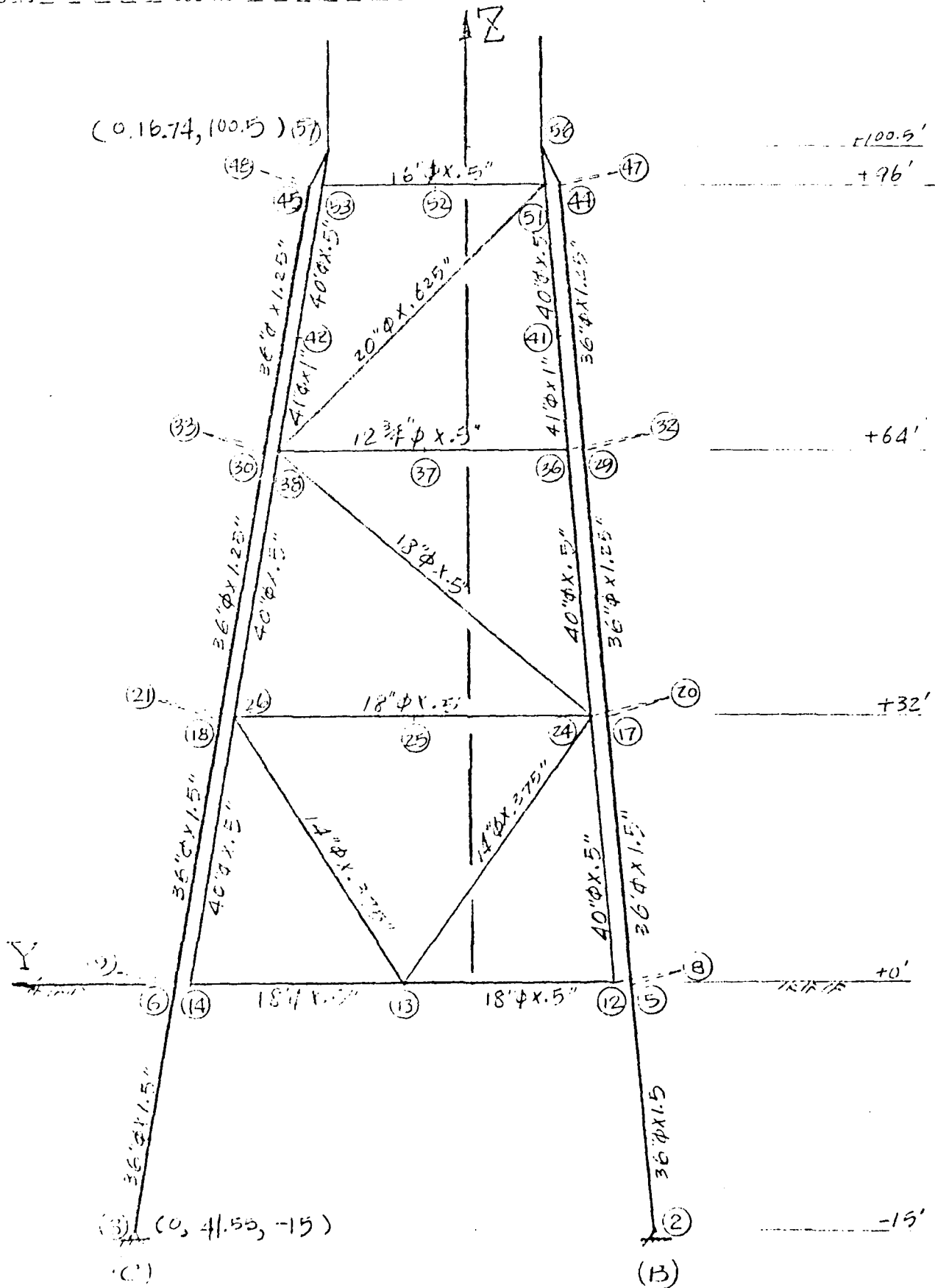


by S.C. 124 Client U.S. Navy

Subject Structural Concept Analysis

Date 4-2-76 Job No 27-271-24

Calculation Structural Analysis



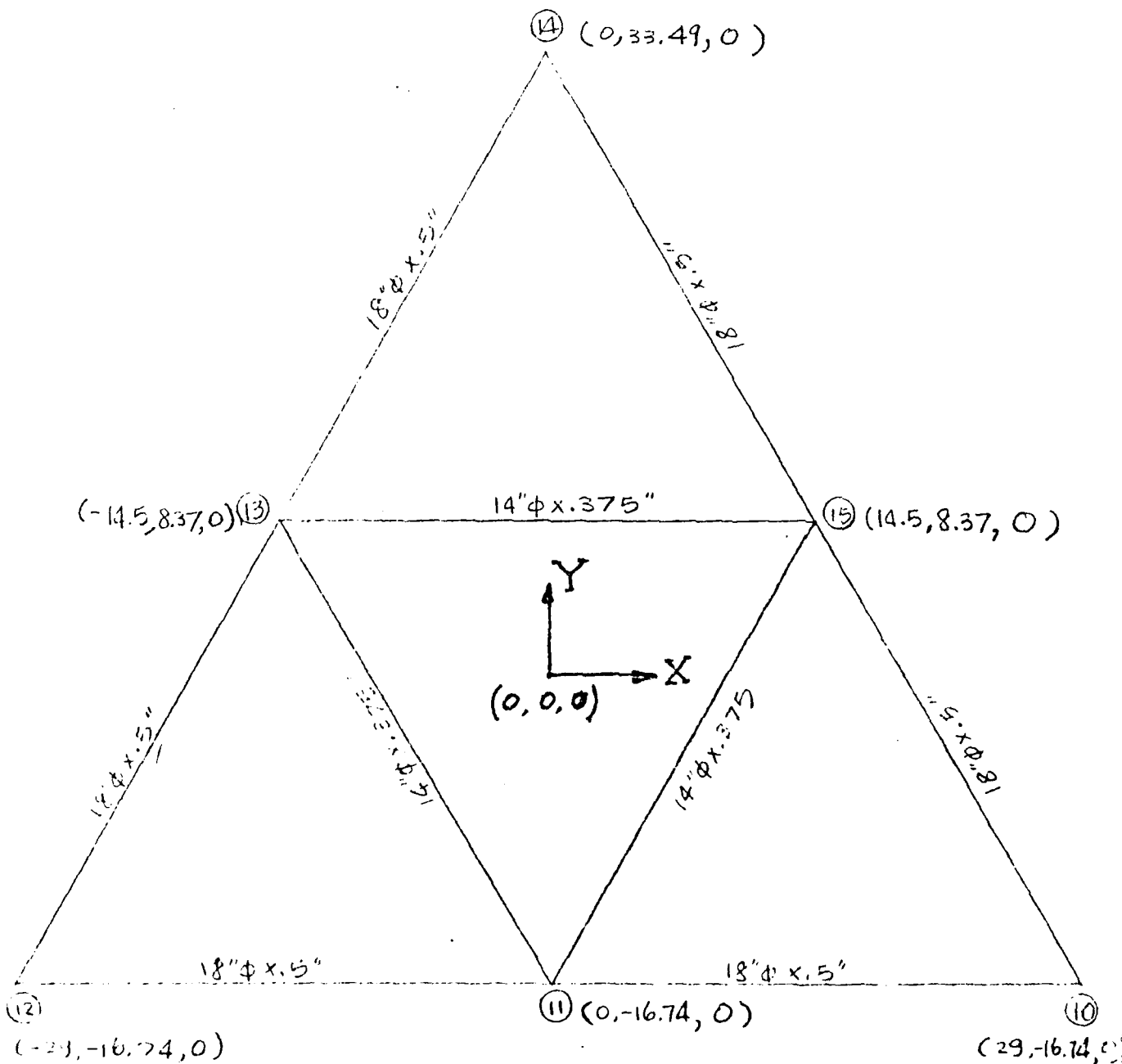
CREST OFFSHORE, INC.

Sheet 2.27 of 12

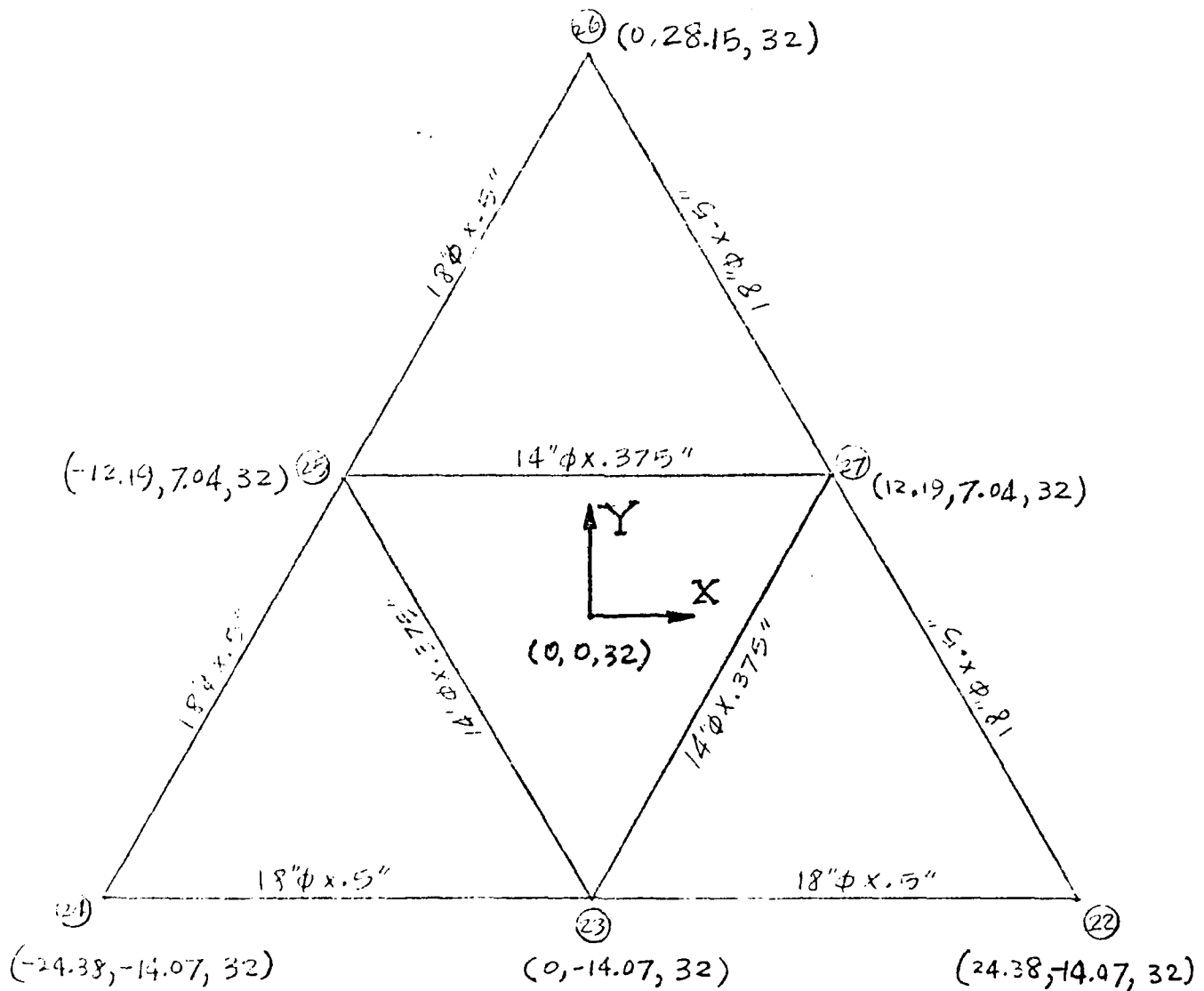
By C. J. [illegible] Client SLB [illegible] Subject Structural Concept Analysis [illegible]
 Date 4-2-76 Job No 22-771-73 Calculation Structural Identification

PLAN

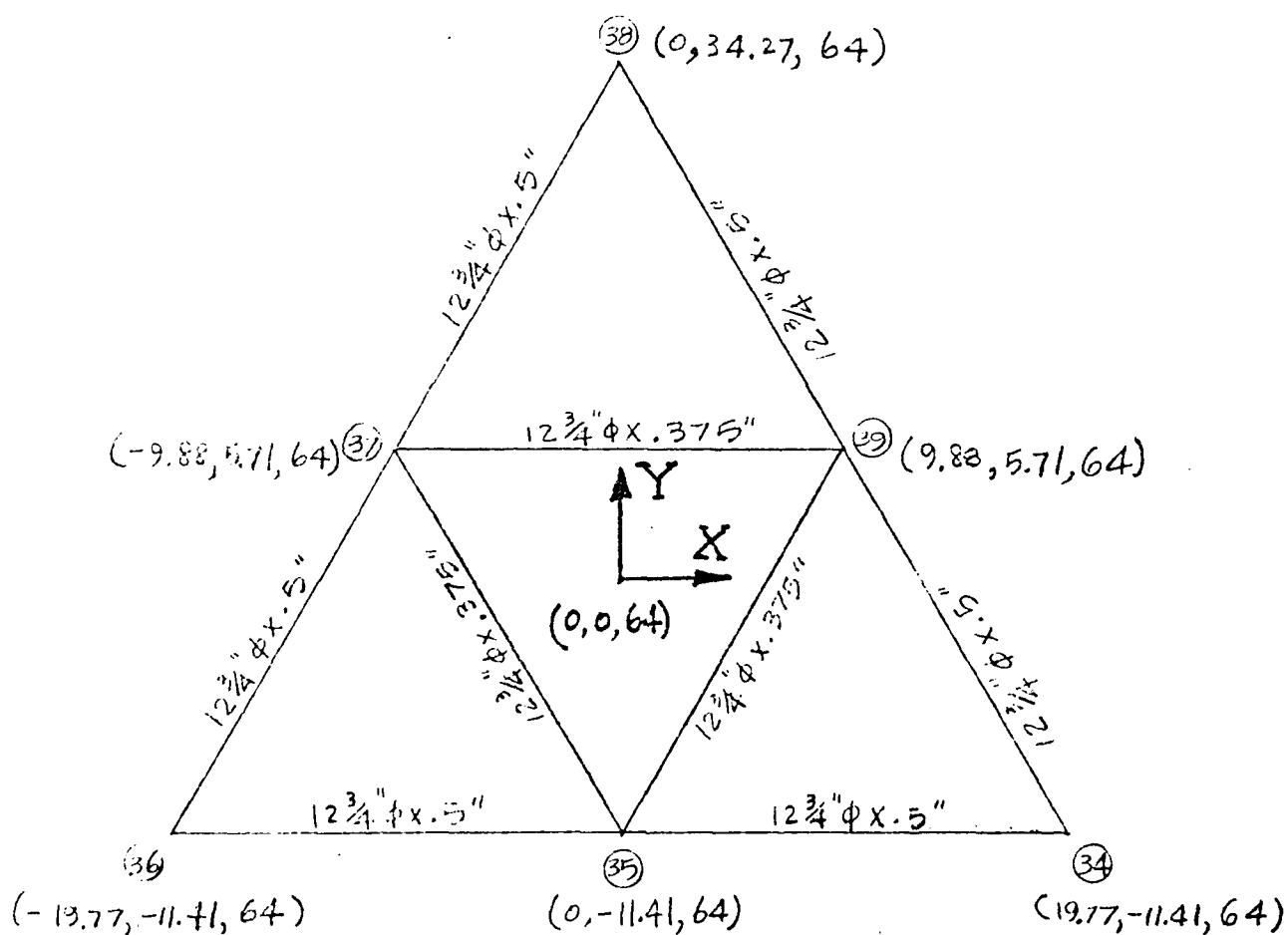
SCALE $\frac{1}{8}" = 1' 0"$



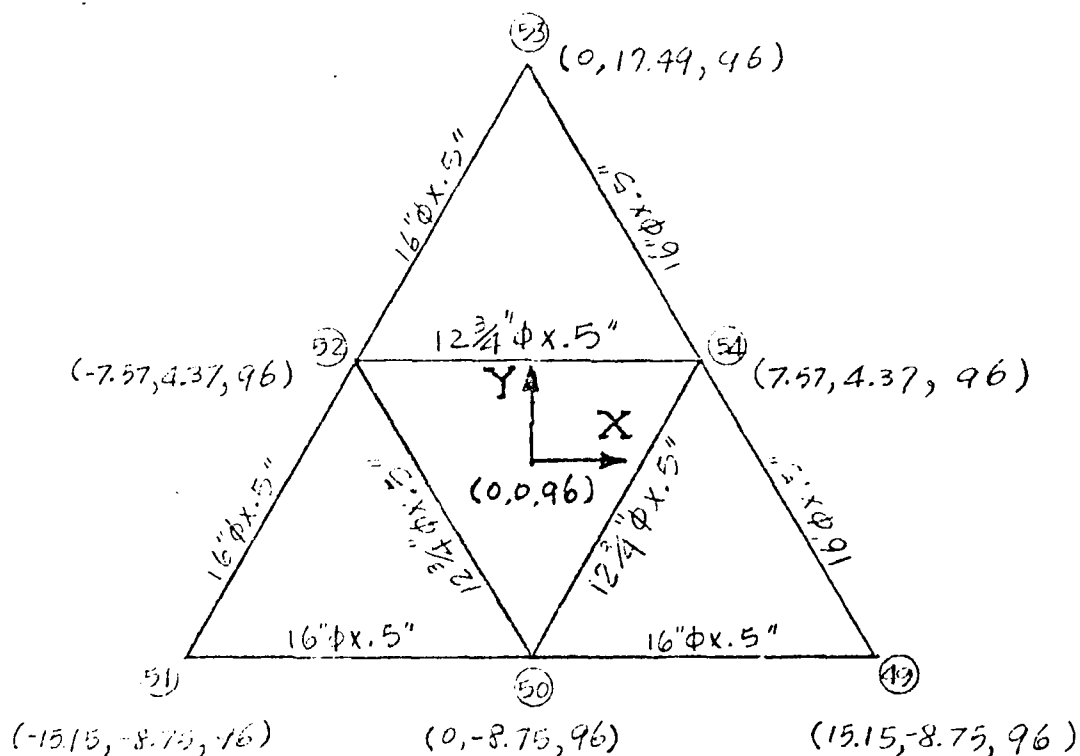
By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-2-76 Job No. 27-016-00 Calculation Structural Identification



By C. Chow Client U.S. NAVY Subject Structural Concept Development
 Date 4-7-76 Job No. 2077-22 Calculation Structural Investigation



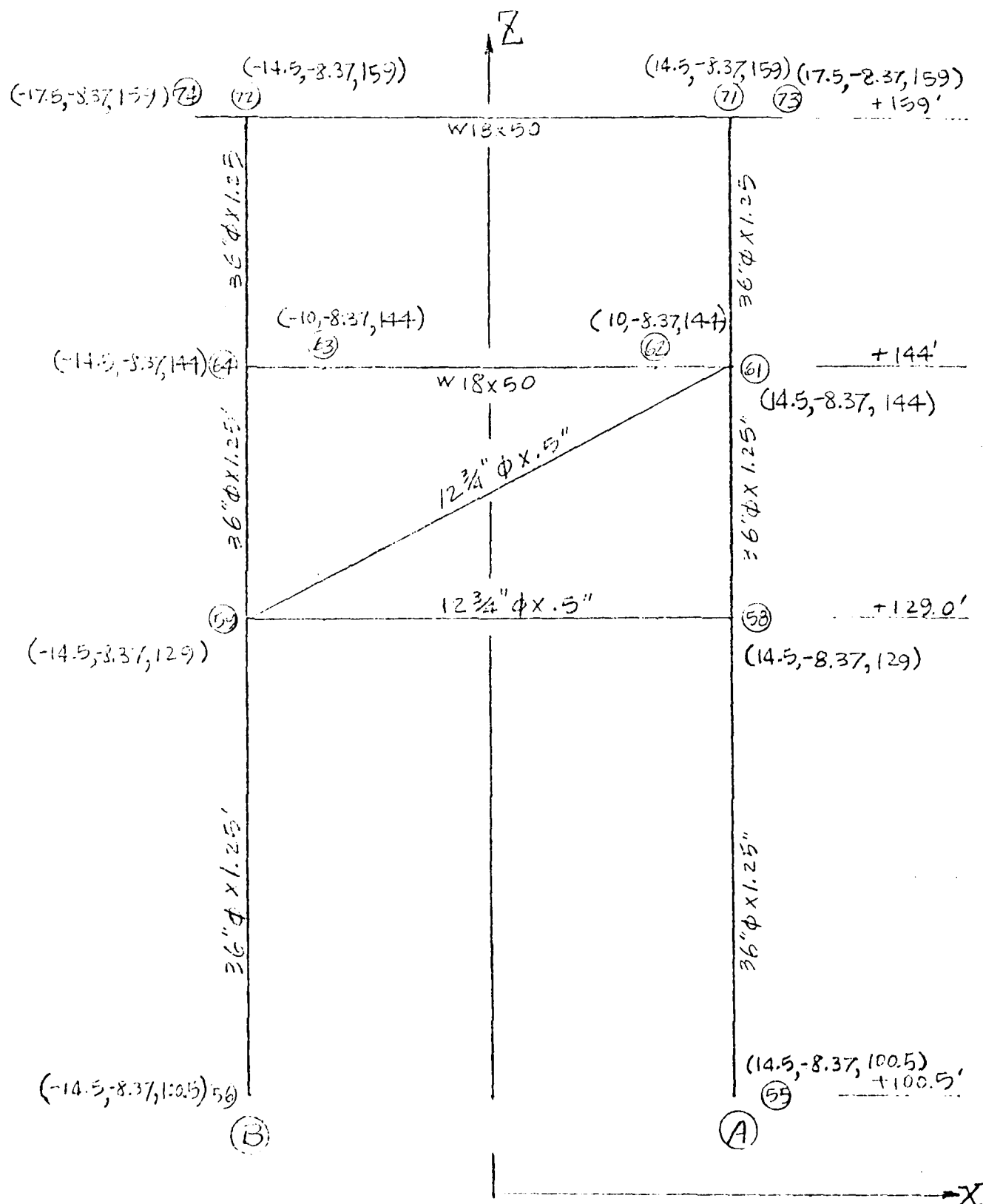
By C. Chong Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-7-76 Job No. 3-1-1-1-72 Calculation Structural Identification



CREST OFFSHORE, INC.

Sheet 2.11 of 17

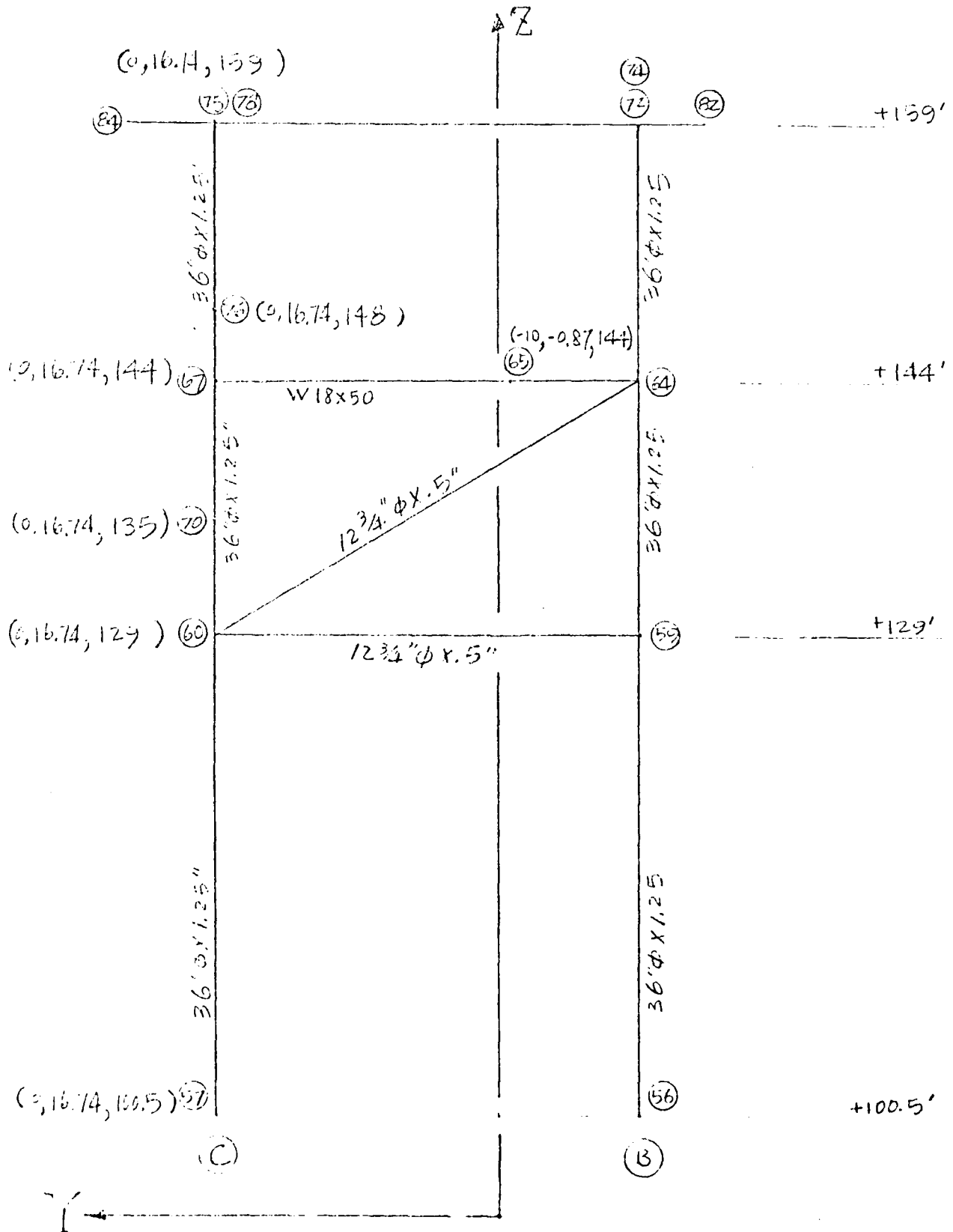
By Client U.S. NAVY Subject STRUCTURAL ANALYSIS
 Date Job No. 27721-92 Calculation Steel Deck Investigation



CREST OFFSHORE, INC.

Sheet 2.2 of 17

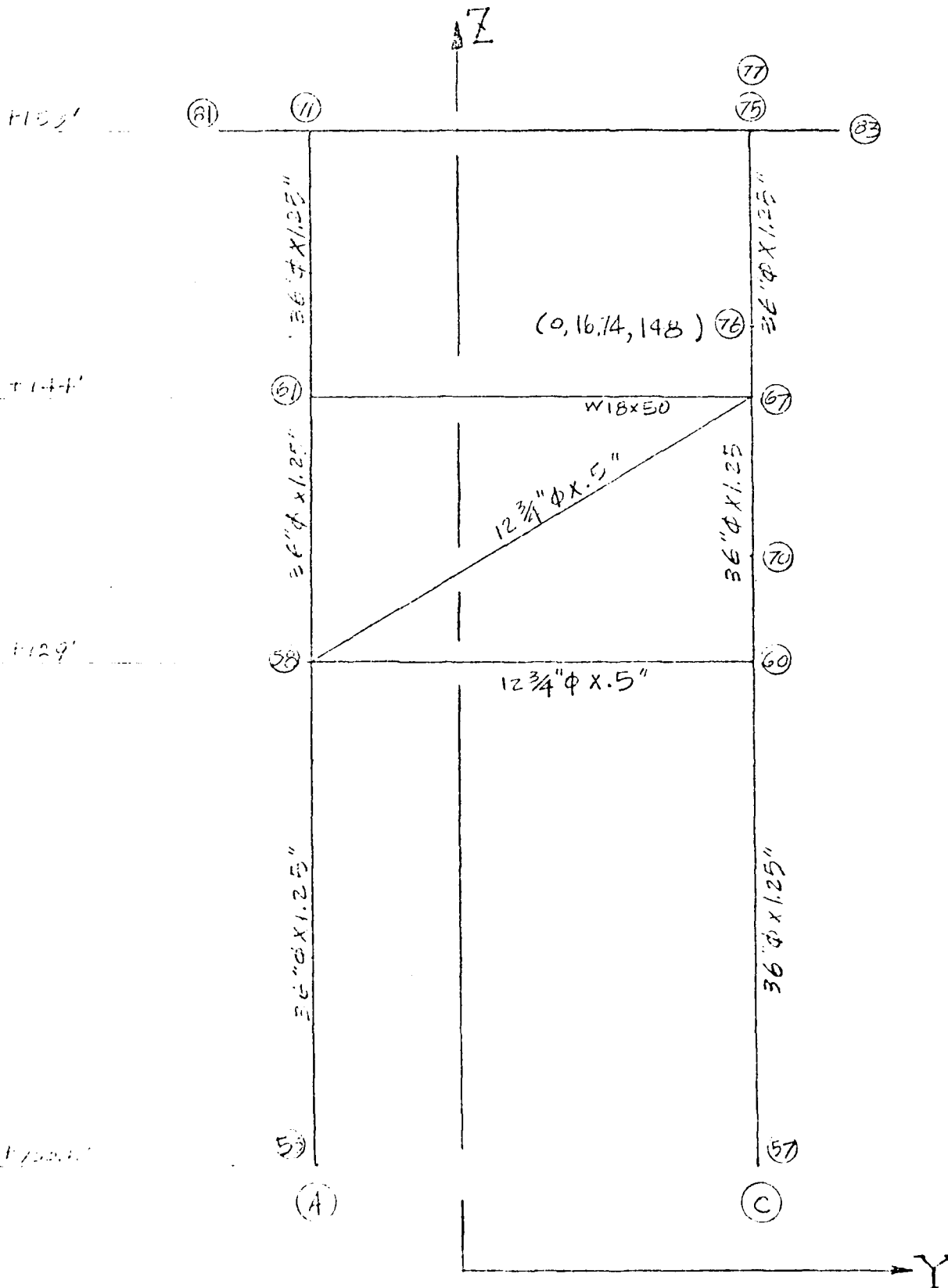
By C. Chou Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-2-76 Job No. 27-271-24 Calculation Structural Investigation



CREST OFFSHORE, INC.

Sheet 112 of 17

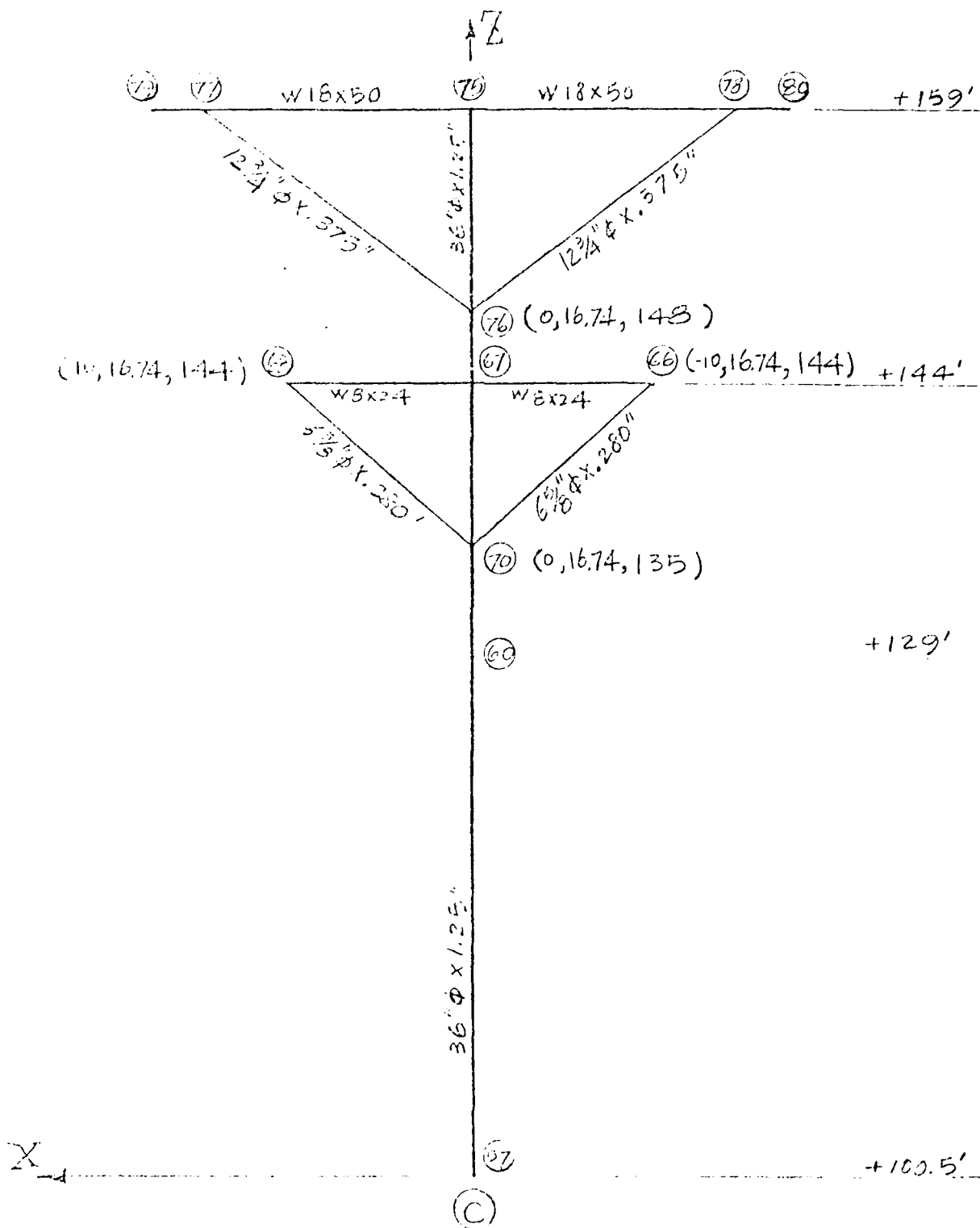
by C. Chern Client U.S. Navy Subject Deck Structure Analysis
 Date 4-7-76 Job No. 27-511-1-2 Calculation Structural Analysis



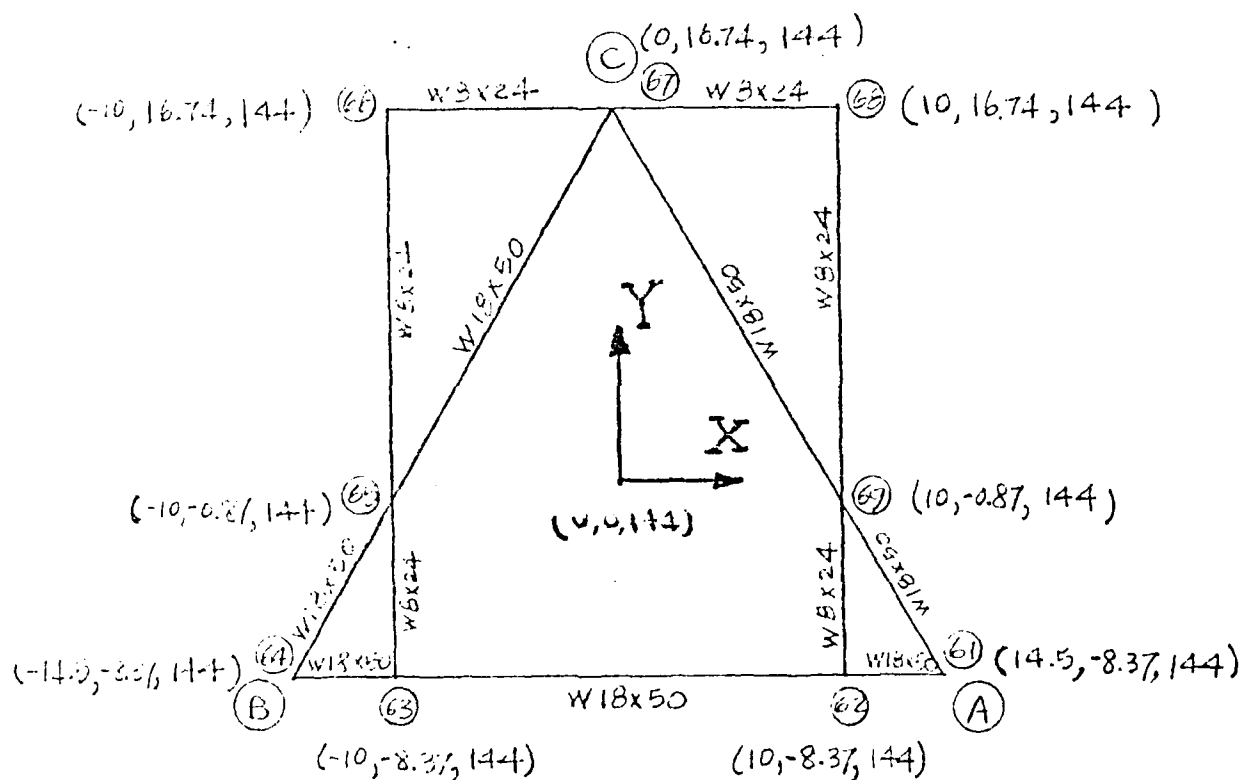
CREST OFFSHORE, INC.

Sheet 8-1 of 17

By C. Ch... Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-8-76 Job No. 27-1771-32 Calculation Structural Identification



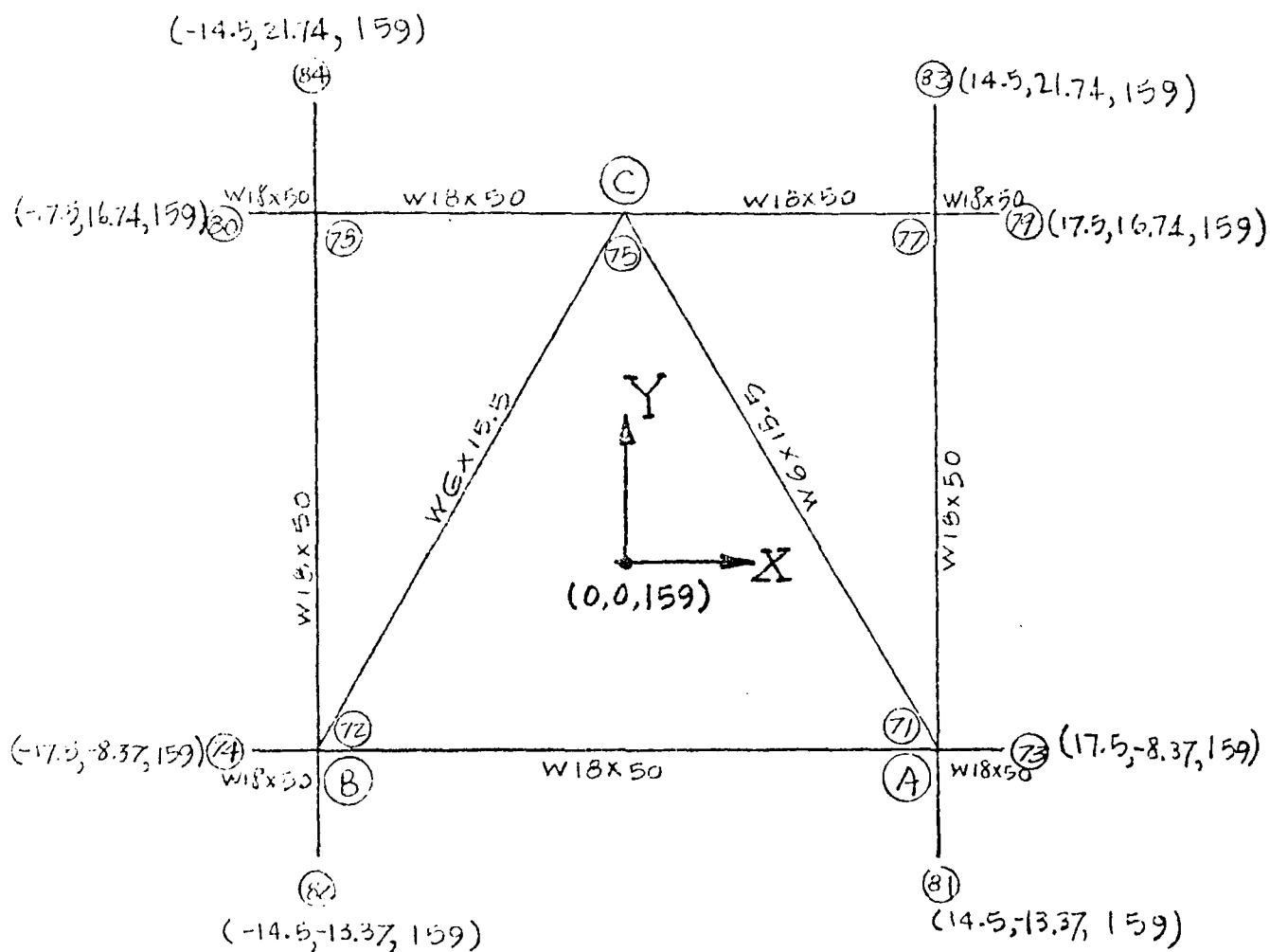
By C. C. Chen Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-8-76 Job No EZ-771-95 Calculation Structural Idealization



CREST OFFSHORE, INC.

Sheet 2.16 of 17

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-3-76 Job No. 27-771-92 Calculation Structural Idealization



By C. Cherry Client U.S. NAVY Subject Structural Concept Analysis
Date 4-8-76 Job No. EZ-77C-92 Calculation Structural Identification

Member Group Designation

P10 = Pile group #1 36" ϕ x 1.75" WT

P20 = Pile group #2 36" ϕ x 1.25" WT

JL1 = Jacket Leg group #1 40" ϕ x .5" WT

JL2 = Jacket Leg group #2 41" ϕ x 1.0" WT

BR1 = Bracing 20" ϕ x .625"

BR2 = Bracing 13" ϕ x .5"

BR3 = Bracing 16" ϕ x .5"

BR4 = Bracing 14" ϕ x .375"

BR5 = Bracing 12 $\frac{3}{4}$ " ϕ x .5"

BR6 = Bracing 12 $\frac{3}{4}$ " ϕ x .375"

BR7 = Bracing 6 $\frac{5}{8}$ " ϕ x .280

WBN = Fictitious wish-bone members 5" x 10" x 1" THK

STL = Superstructure legs 36" ϕ x 1.25" WT

W18 = W 18 x 50

W10 = W 10 x 24

W06 = W 6 x 15.5

SECTION 9
BASIC LOADING CONDITIONS

9.1 INTRODUCTION

The calculations establishing design loads are presented herein.
These loads are comprised of gravity loads, buoyancy and storm
forces.

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
Date 4-22-76 Job No. 27-721-24 Calculation Basic Loading Conditions

3.2 DEAD LOADS

The dead weight tabulated in this section was for the preliminary design only. No effort was made to update the weight due to subsequent modification on the structural components.

CREST OFFSHORE, INC.

Sheet 2.03 of 27

By S. Chou Client U.S. NAVY
Date 4-2-82 Job No. 27-771-92

Subject Structural Concept Analysis
Calculation Basic Loading Conditions

JACKET

MEMBER SIZE	MEMBER LENGTH	NO. REQUIRED	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT
IN. X IN.	FT		FT	LBS/FT	LBS
41" O.D. X 1" WT	6.0	3	18.0	427.2	7,689.6
	10.0	3	30.0		12,816.3
	18.0	3	54.0		23,069.3
	6.79	3	20.4		8,714.9
			122.4		52,290.1
40" O.D. X .5" WT	25.44	3	76.3	210.9	16,091.7
	23.44	3	70.3		14,826.3
	14.44	3	43.3		9,132.0
			189.9		40,050.0
24" O.D. X .75" WT	5.0	3	15.0	186.2	2,793.0
24" X 18" X .75" CONE		6		160.0	960.0
2" O.D. X .75" WT	3.0	3	15.0	138.2	2,073.0
18" O.D. X .5" WT	31.0	6	144.0	93.5	13,464.0
	40.2	6	241.2		22,552.2
	20.5	6	123.0		11,500.5
	54.5	3	163.5		15,287.3
			671.7		62,804.0

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Sheet 9.04 of 27

By C. C. Lee Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-12-76 Job No. 11-171-92 Calculation Basic Loading Conditions

MEMBER SIZE	MEMBER LENGTH	NO. REQUIRED	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT
IN. x IN.	FT		FT	LBS/FT	LBS
140.0 D. x .375 WT	29.0	3	87.0	54.6	4,750.2
	21.4	3	73.2		3,996.7
			160.2		8,746.9
13 1/4 D. x .75 WT	5.0	3	15.0	96.1	1,441.5
2 1/4 D. x .5 WT	17.25	6	103.5	68.4	6,768.9
	12.5	3	37.5		2,452.5
			141.0		9,221.4
12 1/2 D. x .375 WT	19.7	3	59.1	49.6	2,931.4
20" D. x .625 WT	47.3	3	141.9	129.3	18,347.7
16" D. x .75 WT	5	3	15.0	122.2	1,833.0
16" D. x .75 WT	12.5	6	75.0	82.8	6,210.0
5 1/2 D. x .125 WT	10.0	3	30.0	19.0	570.0
	5.0	3	15.0		285.0
	2.5	3	7.5		142.5
			52.5		997.5
TOTAL					210,670#

CREST OFFSHORE, INC.

Sheet 9.05 of 27

Sy C. Cho. Client U.S. NAVY Subject Structural Concept Analysis
Date 4-12-76 Job No. 22-221-92 Calculation Basic Loading Conditions

SUPERSTRUCTURE

MEMBER SIZE	MEMBER LENGTH	NO. REQUIRED	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT
	FT		FT	LBS/FT	LBS
6 1/2" D. x 1.25 WT	57.0	3	171.0	464.0	79,344.0
2 1/2" D. x .5 WT	26.0	3	78.0	65.4	5,101.2
	28.6	3	85.8		5,611.3
			163.8		10,712.5
2 1/2" D. x .375 WT	16.7	2	33.4	49.6	1,656.6
6 1/2" D. x .28 WT	11.2	2	22.4	19.0	425.6
W 13 x 60	26.0	3	78.0	50.0	3,900.0
	35.0	4	140.0		7,000.0
			218.0		10,900.0
W 12 x 27	35.0	4	140.0	27.0	3,780.0
W 8 x 24	25.0	2	50.0	24.0	1,200.0
	20.0	10	200.0		4,800.0
			250.0		6,000.0
C 12 x 7.5	35.0	4	140.0	25.0	3,500.0
	3.0	4	12.0		300.0
			152.0		3,800.0
W 6 x 13.5	25.0	2	50.0	16.5	806.0

CREST OFFSHORE, INC.

Sheet 7-6 of 27

by C. C. Chen Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-12-76 Job No 27-771-92 Calculation Basic Loading Conditions

MEMBER SIZE	MEMBER LENGTH	NO. REQUIRED	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT
	FT		FT	LBS/FT	LBS
4x3 ³ F.B.	5.75	33	189.8	5.10	963.0
	5.83	22	128.3		654.3
	3.0	4	12.0		61.2
			330.1		1,683.5
1/4" PL	35x35	1	1,225.0 ⁺	10.2	12,495.0
	20x25	1	500.0		5,100.0
			1,725.0 ⁺		17,595.0
TOTAL					136,703.2 ⁺

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Sheet 7.07 of 27 (3) pile

By C. Chen Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-12-76 Job No. 22-771-22 Calculation Brice Loading Condition

PILINGS -- Measured To 5-D Below Mudline

MEMBER SIZE	MEMBER LENGTH	NO. REQUIRED	TOTAL LENGTH	UNIT WEIGHT	TOTAL WEIGHT
	FT		FT	LBS/FT	LBS
36"O.D. X 1.5" WT	47.65	3	142.95	552.7	79,008.5
36"O.D. X 1.25" WT	69.44	3	208.33	463.9	96,644.3
TOTAL					175,652.8

CREST OFFSHORE, INC.

Sheet 9.26 of 27

by C. Chern Client U.S. NAVY Subject Structural Concept Analysis
Date 4-13-76 Job No. 27-171-92 Calculation Basic Loading Conditions

SUMMARY

JACKET

210.7 KIPS

SUPERSTRUCTURE
(EXCLUDING AUXILIARY
ATTACHMENT)

136.7 KIPS

PILINGS
(EXCLUDING PORTIONS
BEYOND 5-D BELOW
MUDLINE)

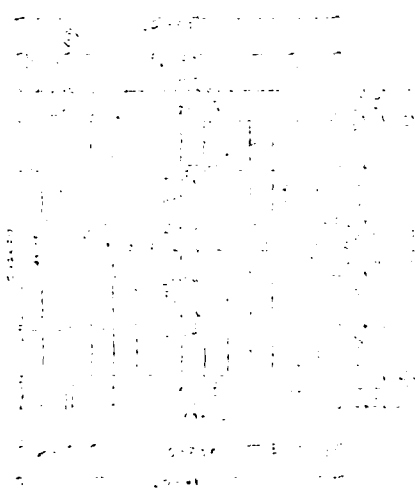
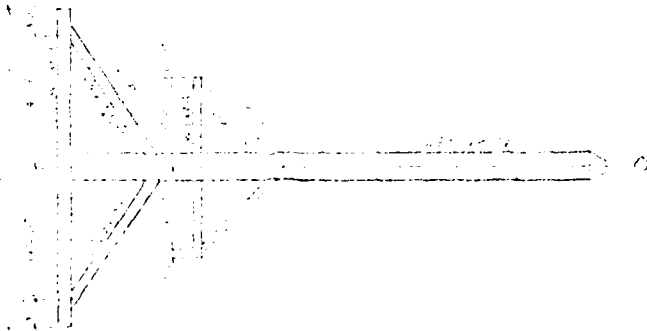
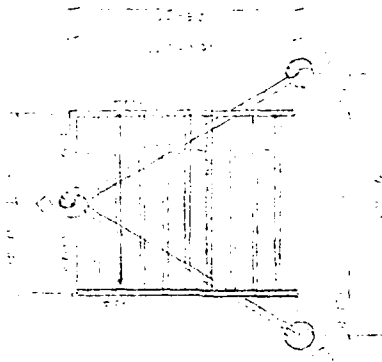
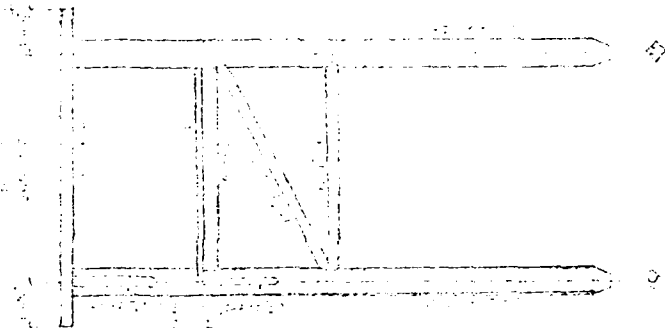
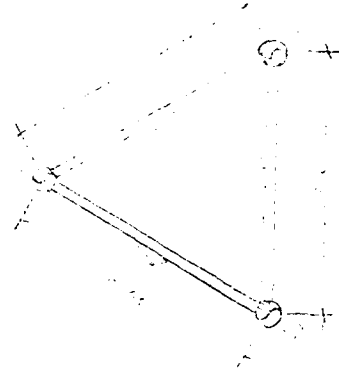
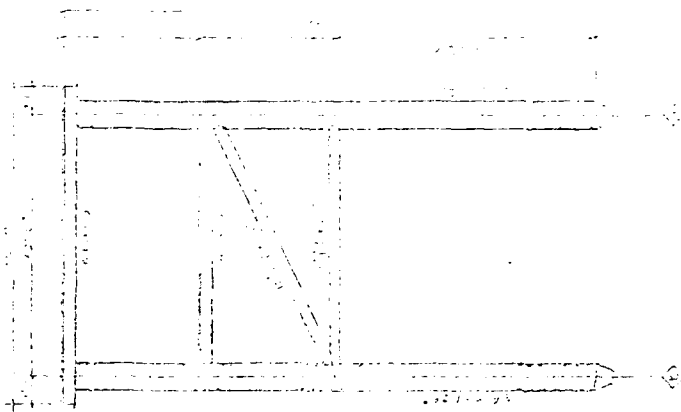
175.7 KIPS

523.1 KIPS

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Sheet 9.15 of 27

By C. L. H. H. Client U.S. Navy Subject Structural Control Diagrams
Date 4-11-76 Job No. 27-271-44 Calculation Base Load Diagrams



by S. S. S. S. Client U.S. NAVY Subject Structure Concept Analysis
Date 4-21-76 Job No. 27-771-1 Calculation Basic Loading Calculations

9.3 BUOYANCY

The buoyancy effect on the structure was tabulated in this section. These data were for early stage of preliminary design only. No effort was made to update the data due to subsequent modifications in member sizes.

The application of buoyancy to the space frame analysis will be directly from SEALOAD-2 program presented in SECTION 10, Space Frame Analysis.

CREST OFFSHORE, INC.

Sheet 112 of 27

By C. C. Hare Client U.S. Navy Subject Structure of Crest
 Date 4-12-76 Job No 27-77-22 Calculation 5-22-76 CCH

Max. Crest Elevation = +142' above m.d.l.s.

Member Size	Member Length	Unit Volume	Buoyancy $\gamma = 64 \frac{\text{lb}}{\text{cu ft}}$	Moment Arm (WRT. D.C.)	Overturning Moment
IN. X IN.	FT	FT ³ /FT	LBS	FT	FT-LBS
40" O.D. X .5" WT	100.5	0.43	2,766	41.85	115,757
40" O.D. X .5" WT	100.5 x 2	0.43	5,532	4.19	23,179
36" O.D. X 1.5" WT	32.4	1.13	2,343	47.56	111,433
36" O.D. X 1.5" WT	32.4 x 2	1.13	4,686	2.67	12,512
36" O.D. X .25" WT	64.8	0.43	3,739	39.56	147,915
36" O.D. X .25" WT	64.8 x 2	0.43	7,478	5.33	42,064
36" O.D. X .25" WT	41.5	7.07	18,778	33.48	628,687
36" O.D. X .25" WT	41.5 x 2	7.07	37,556	8.37	314,344
36" O.D. X .5" WT	32.4 x 2	1.77	13,140	25.11	329,945
36" O.D. X .5" WT	29.0	1.07	14,36	25.11	49,868
36" O.D. X .5" WT	29.0 x 2	1.07	3,772	12.56	49,388
36" O.D. X .5" WT	40.2 x 4	1.07	11,012	25.11	276,511
36" O.D. X .5" WT	29.0 x 2	1.07	3,506	1.33	7,623
36" O.D. X .5" WT	43.0 x 2	1.77	11,043	25.11	262,650
36" O.D. X .5" WT	43.75	1.77	5,522	2.67	14,744

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Sheet 112 of 27

By: W. E. J. J. Client: U. S. Navy Subject: Struct. of Concrete
 Date: 11/1/68 Job No.: 1111 Calculation: Basic Load

MEMBER SIZE	MEMBER LENGTH	UNIT VOLUME	BUOYANCY $\gamma = 64 \frac{\text{lb}}{\text{cu ft}}$	MOMENT AREA	OVERTURNING MOMENT
IN. x IN.	FT	FT ³ /FT	LBS	FT	FT-LBS
16'0.0 x .375 WT	24.4	1.07	1,671	23.80	39,770
14'2.0 x .375 WT	24.4 x 2	1.07	3,342	13.24	44,248
18'0.0 x .5 WT	24.5 x 2	1.77	12,348	23.98	293,635
18'0.0 x .8 WT	54.5	1.77	6,174	4.0	24,696
12'3.0 x .5 WT	31.5 x 2	0.89	4,300	22.45	101,025
10'3.0 x .5 WT	29.5	0.89	2,260	5.53	11,993
12'3.0 x .375	19.7	0.89	1,122	22.45	25,191
12'3.0 x .375	19.7 x 2	0.89	2,244	13.89	31,169
20'5.0 x .6 WT	47.3 x 2	2.18	13,200	22.45	296,340
20'5.0 x .6 WT	47.3	2.18	6,600	7.91	52,206
16'0.0 x .5 WT	20 x 2	1.40	3,376	21.37	114,885
16'0.0 x .5 WT	20	1.40	2,638	8.38	22,525
12'4.0 x .5 WT	15	0.89	864	21.37	18,250
12'4.0 x .5 WT	15 x 2	0.89	1,728	14.27	25,415
10'3.0 x .5 WT	29 x 2	0.89	3,304	20.94	69,186
12'3.0 x .5 WT	29	0.89	1,652	8.33	13,761

CREST OFFSHORE, INC.

Sheet 214 of 27

By C. Chert Client U.S. Navy Subject Structural Concept Analysis
 Date 4-18-66 Job No. 27-71-82 Calculation Basic Loading Conditions

MEMBER SIZE	MEMBER LENGTH	UNIT VOLUME	BUOYANCY $\gamma = 64 \frac{\text{lb}}{\text{cu ft}}$	MOMENT ARM	OVERTURNING MOMENT
IN. x IN.	FT	FT ³ /FT	LB	FT	FT-LB
12.750 x 6 WT	28.65	2.89	1,632	8.45	13,676
12.750 x 12 WT	28.65 x 2	2.89	3,264	20.94	68,348
TOTAL			209,404 ⁺		3,653,139 ⁺

by C. C. Brown Client U. S. NAVY

Subject Structural Concept Analysis

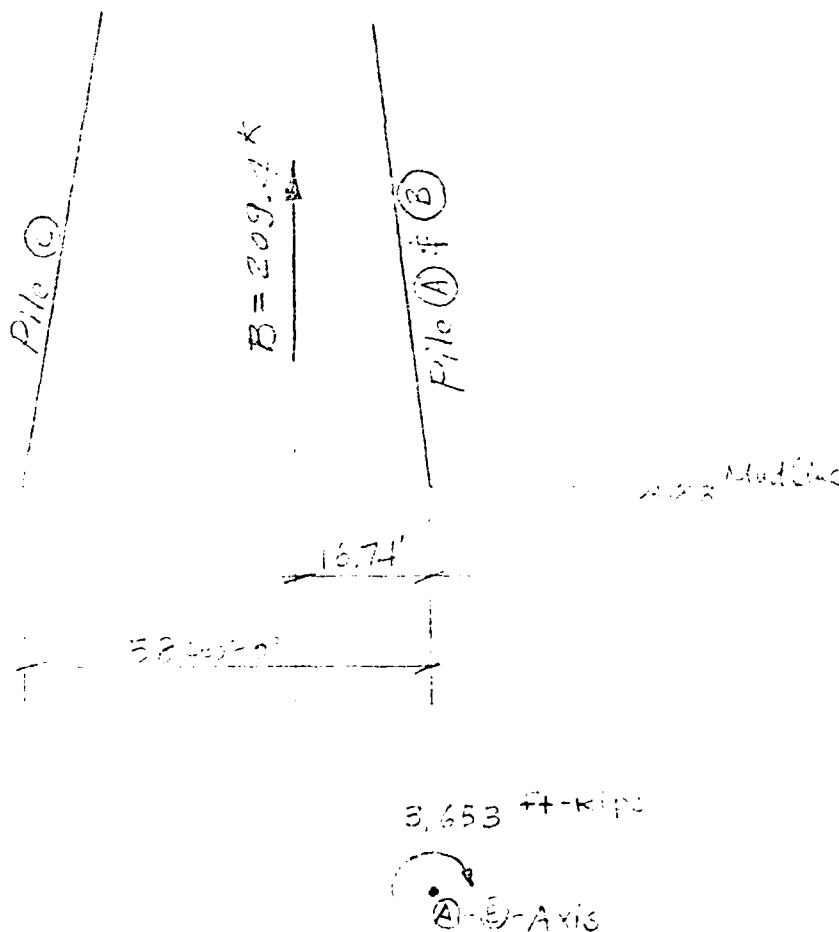
Date 4-1-77 Job No. 27-57122

Calculation Basic Loading

SUMMARY

BUOYANCY $B = 209.4 \text{ KIPS}$

OVERTURNING MOMENT ABOUT
 (A)-(B) AXIS $M_B = 3,653 \text{ ft-kips}$



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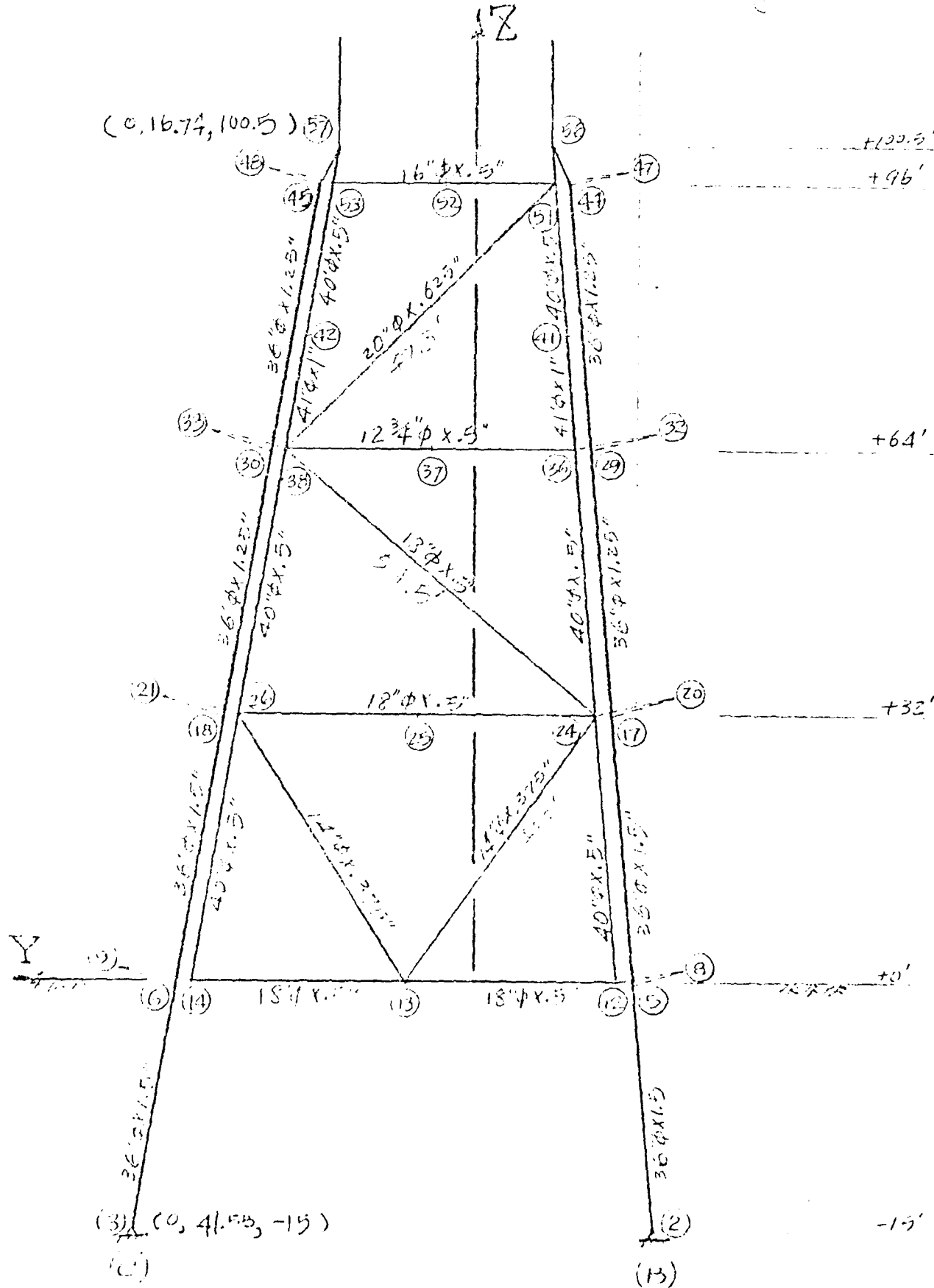
Sheet 2.12 of 2.12

By C. R. Jones Client U.S. NAVY

Subject Structural Concept & Analysis

Date 4-2-72 Job No. 27-271-92

Calculation Bulk Loading Condition



by P.R./m Client U.S. NAVY Subject Structural Concept Analysis
Date 4-22-75 Job No. 27-271-12 Calculation Env. Loading Conditions

6-3 LIVE LOADS

The specified live loads for the structure are as follows:

(1) 150 psf on equipment deck

(2) 100 psf on top deck

The live loads were used to check the size of deck beams and deck plate reinforcements.

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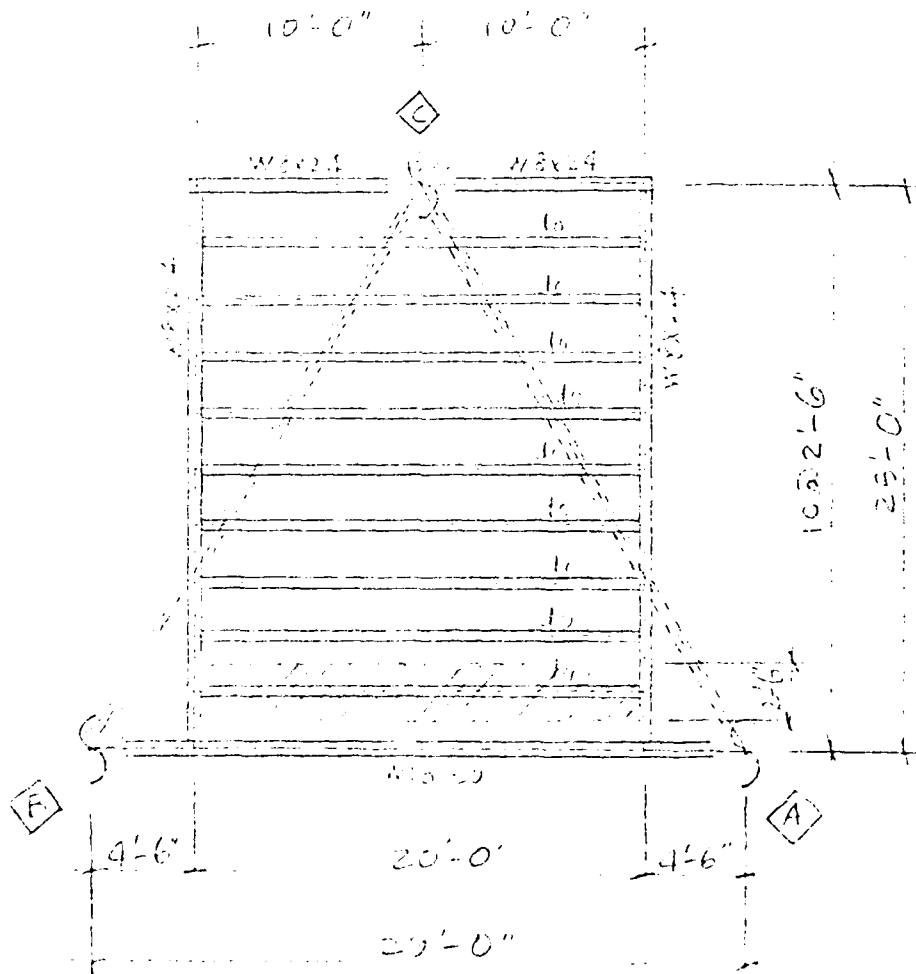
Sheet 112 of 27

By C. C. Carr Client U.S. NAVY Subject Structure of Deck Area
 Date 4-2-76 Job No. 27-771-92 Calculation Live Loading

LIVE LOADS ON EQUIPMENT DECK

DESIGN LOADS (GIVEN) = 150 PSF

SCALE $\frac{1}{8}" = 1'-0"$



CREST OFFSHORE, INC.

Sheet 2-12 of 27

By C. Chere Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-2-76 Job No. 27-771-92 Calculation Basic Loading Conditions

Check Beam W8x24

Span $(= 20'-0")$

Tributary Area $A = 2.5 \times 20 = 50 \text{ sq. ft.}$

Live Load $W_L = 150 \times 50 = 7500 \#$

$\frac{1}{4}" \text{ P}$ $W_{DL1} = 10.2 \times 50 = 510 \#$

$W8x24$ $W_{DL2} = 24 \times 20 = 480 \#$

Total Weight $= 8430 \#$

$w = 424.5 \#/\text{ft}$

$$\text{Max. Mom. } M = \frac{wL^2}{8} = \frac{424.5 \times 20^2 \times 12}{8} = 254.7 \text{ K}$$

$W8x24$ $I_x = 20.8 \text{ in}^2$

$$\text{Max. Stress } \sigma = \frac{254.7}{20.8} = 12.25 \text{ ksi} < 22 \text{ ksi}$$

O.K.

* Note: Continuous sealed welds of $\frac{1}{4}"$ plate and the stiffeners in flange will provide sufficient lateral support to the composite flange against lateral buckling.

CREST OFFSHORE, INC.

Sheet 722 of 27

e, C. Chaz client U.S. NAVY

Subject Structural Concrete

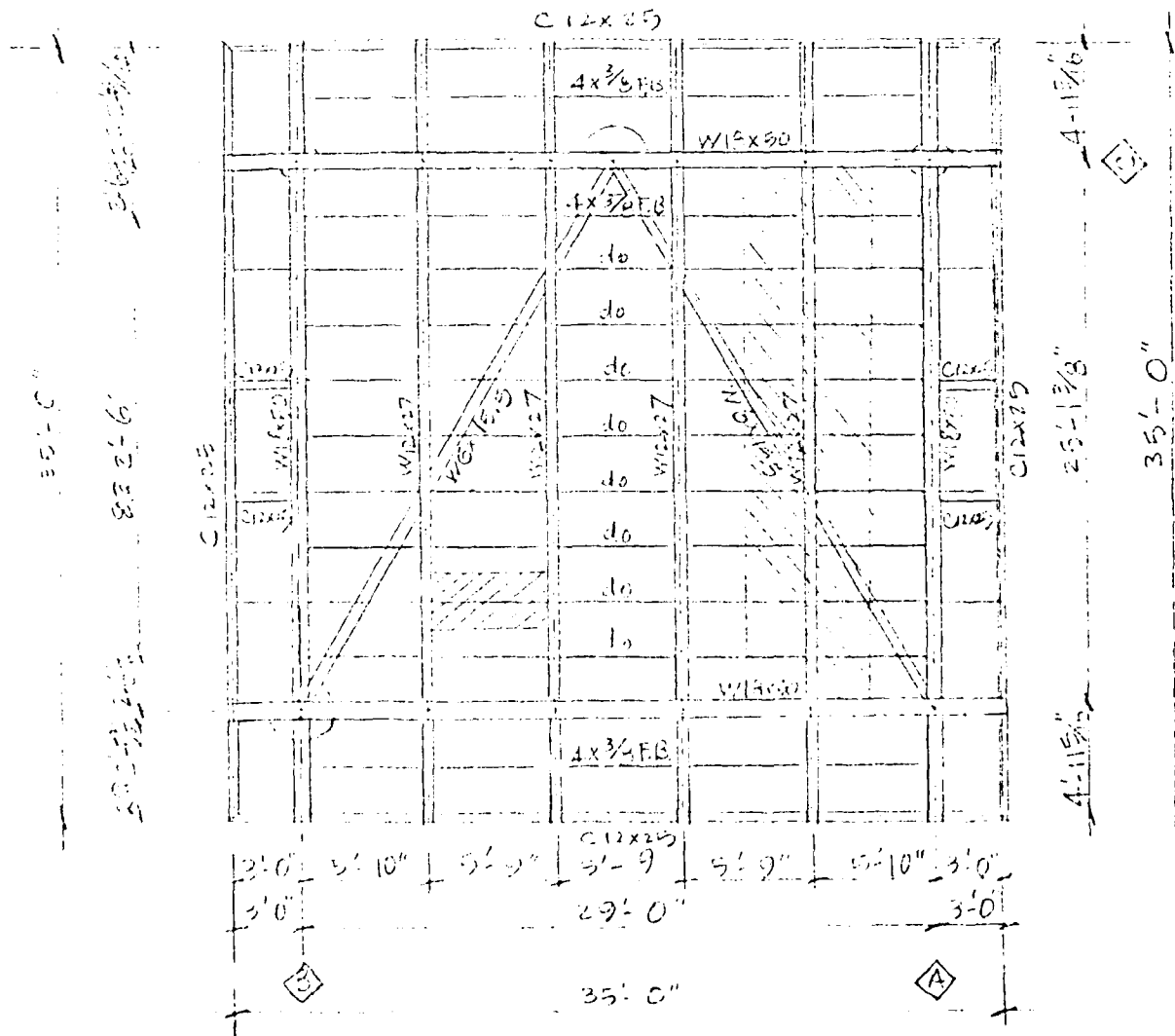
Date 4-2-61 Job No. 27-711

Calculation Basic Working Conditions -

Live Loads on Top Deck

Desired Load (lb/inch) = 100 psf

SCALE $\frac{1}{3}'' = 1'-0''$



CREST OFFSHORE, INC.

Sheet 1.21 of 27

By S. Chao Client U.S. NAVY Subject Structural Concept Analysis
 Date 4-9-76 Job No. 27-771-92 Calculation Beam Loading Conditions

Check Beam W12x27

Span

$$L = 23' - 0"$$

Tributary Area

$$A = 6.75 \times 21 = 143.75 \text{ sq. ft.}$$

Live Load

$$W_{LL} = 10 \times 143.75 = 1437.5 \#$$

$\frac{1}{2} D$

$$W_{DL1} = 10.25 \times 143.75 = 1473.8 \#$$

W12x27

$$W_{DL2} = 27 \times 23 = 621 \#$$

$$\text{Total} = 16 \times 16 \#$$

$$w = 680 \#/\text{ft.}$$

$$\text{Max. Mom. } M = \frac{wL^2}{8} = \frac{0.68 \times 23^2 \times 12}{8} = 613.75 \text{ K}$$

$$W12x27 \quad S_x = 4.2 \text{ in}^3$$

$$\text{Max. Stress } \sigma = \frac{613.75}{4.2} = 146 \text{ ksi} < 22 \text{ ksi}$$

O.K.

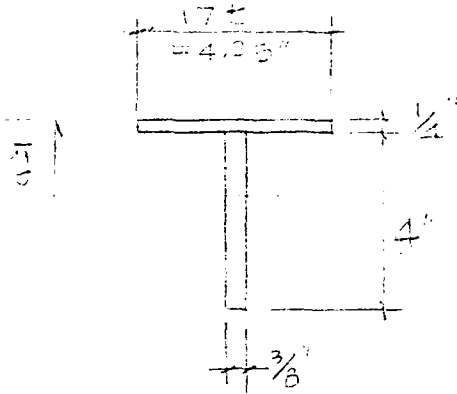
CREST OFFSHORE, INC.

Sheet 2 of 27

By C. Chryx Client U.S. NAVY Subject Structural Capacity Analysis
 Date 4-6-92 Job No. 3275-92 Calculation Basic Loading Conditions

Check $4 \times \frac{3}{8}$ Flat Bars

Effective width $b = 17 \times \frac{1}{4} = 4.25"$



Span $(= 5'-0")$

$$\text{Flange Area} = 5.75 \times 2.5 = 14.4"$$

$$\text{Live Load } W_{LL} = 100 \times 14.4 = 1440"$$

$$\frac{1}{4}" \text{ FL } W_{OL1} = 10.2 \times 14.4 = 147"$$

$$4 \times \frac{3}{8}" \text{ FB } W_{OL2} = 5.10 \times 3.75 = 27"$$

$$\text{Total } \underline{1616"}$$

$$W = 281 \text{ #/ft}$$

$$\text{Max. Mom. } M = \frac{281 \times 5.75^2 \times 0.125}{8} = 13.9 \text{ "K}$$

$$\bar{y} = \frac{.25 \times 4.25 \times .125 + .375 \times 4 \times 2.25}{.25 \times 4.25 + .375 \times 4} = \frac{3.51}{2.70} = 1.3"$$

$$I = \frac{1}{12} \times \frac{1}{4} \times 4.25^3 + \frac{3}{8} \times 4 \times (2 - 1.25)^2 + 4.25 \times \frac{1}{4} \times (1.3 - 0.125)^2$$

$$= 2 + 1.334 + 1.467$$

$$= 4.821 \text{ in}^4$$

$$S = \frac{4.821}{4 - (1.3 - .25)} = 1.63 \text{ in}^3$$

$$\text{Max. Allowable Stress } \sigma = \frac{13.9}{1.634} = 8.51 \text{ ksi} < 22 \text{ ksi}$$

O.K.

CREST OFFSHORE, INC.

Sheet 1 of 27

By C. C. Linn Client U.S. NAVY Subject Struct. & Concept Analysis
Date 4-27-77 Job No. 27-771-32 Calculation Base Loading Conditions

9.3 WIND LOADS

Set forth herein is the basic wind load data for the input into SEALOAD-2 computer program. The computer program output is presented in A.4 Wave and Wind Loads of APPENDIX A.

AD-A164 421

STRUCTURAL CONCEPT ANALYSIS REPORT FOR THE EAST COAST
AIR COMBAT MANEUVER. (U) CREST ENGINEERING INC TULSA OK
MAY 76 27-771-92-APP-C CHES/NAVFAC-FPO-7601-APP-C

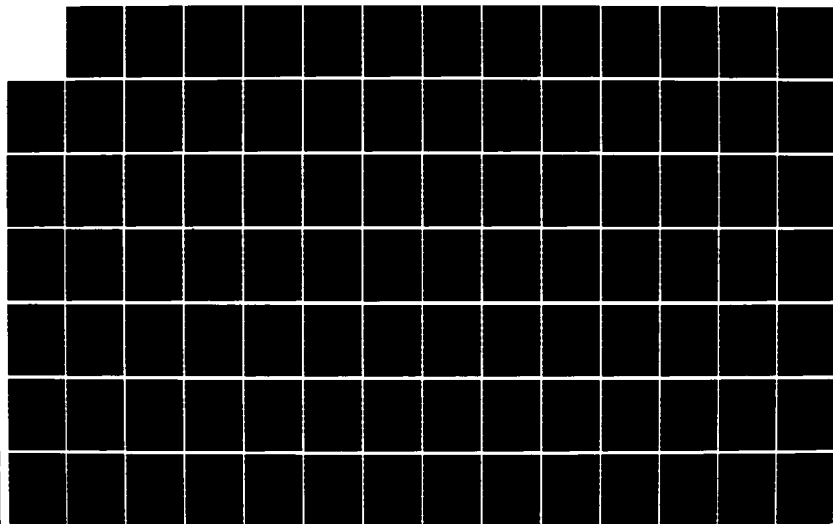
3/7

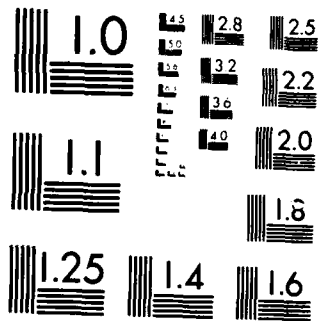
UNCLASSIFIED

N62477-76-C-0179

F/G 13/13

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

CREST OFFSHORE, INC.

Sheet 1 of 4 (5/19)

By: C. J. [illegible] Date: 4-18-74 Subject: Structural Load Calculations
 Job No: 27-771-92 Calculation: Basic Loading Calculations

* Ref: Notes from Steve Pitzer, 12-14-74

WIND FORCES

$$F = 0.00256 C_s A C_H V^2$$

F = Force in lbs.

V = velocity @ 30 ft elev. = 150 knots = 173 mph

$C_s = 1.5$ for flat surfaces

$= 1.0$ for cyl. surfaces

A = projected area of surface (sq ft)

$C_H =$ height coeff $= (H/30)^{1/4}$

Calculate psf wind force on flat surfaces:

$$F/A @ 30 ft elev = (0.00256)(1.5)(1)(173)^2 = 115 \text{ psf}$$

$$F/A @ 75 ft elev = (115)(\frac{15}{30})^{1/4} = 115(1.3) = 150 \text{ psf}$$

For cylindrical members.

$$F/A @ 30 ft = 77 \text{ psf}$$

$$F/A @ 75 ft = 100 \text{ psf}$$

{ Elev referenced
to MLW }

by George J. Clark, M.S., P.E. Subject Structural Design of Platform
 Date 11/1/77 Job No. 11-1-77 Calculation Wind Force Calculation

Wind Force Area Calc:

$$\begin{aligned} \text{Wind pressure} &= 150 \text{ psf} && (\text{Flat}) \\ &100 \text{ psf} && (\text{cylindrical}) \end{aligned}$$

Assume:

A. Projected Area Above Top Deck due to
 fence is $45' \times 2' \text{ h.}$

B. Area from top of top deck to
 bottom of lower deck is
 solid plate

Calculations

$$F(\text{top deck}) = 45 \times 2 \times 150 = 13.5^k$$

$$F(\text{between decks}) = 13.5 \times 3.5 \times .15 = 55.7$$

Stairways & Landings =

$$\text{Landings } (12' \times 2' \times .15) = 4.8$$

$$\text{Stairs } (21' \times 2' \times .15) = 6.3$$

$$\text{Antennas} \quad \underline{\underline{2.0}}$$

$$82.3^k$$

Wind is at 45° to structure axis

Wind Force on each FACE:

$$\text{Top Deck} = (.707)(13.5) = 9.55^k$$

$$\text{Lower Deck} = (.707)(82.3 - 13.5) = 48.8^k$$

By C. C. Berry Client Shell Subject Structural Steel Deck
 Date 4-9-76 Job No. 27-721-2 Calculation End Frame Sections

Wind Area & Area Vertical Centroid Location

Segment #1

Projected Area of top deck and frame

$$A_1 = 45 \times 2 = 90 \text{ sq. ft.}$$

(width) x (Height)

$$\text{Centroid from mid-line} = 15.9 \text{ ft.}$$

Segment #2

$\frac{2}{3}$ Area below top of air and equipment deck
 is a solid plate

$$A_2 = \frac{2}{3} (29 \times 15) = 290 \text{ sq. ft.}$$

$$\text{Centroid from mid-line} = 15.9 - 10 = 5.9 \text{ ft.}$$

Client: Shell International Chemical Company
Subject: Design of Offshore Platform
Date: 11/1/77 Job No. 27-271-1 Calculation: Design Wave Condition

3.6 WAVE LOADS

Wave loads on the structure are generated through the SEALOCC-2 computer program. Calculated wave format are presented in A.4. Design Wave Load in APPENDIX A.

Design wave characteristics was presented in Sec. 1.2, Design Criteria.

SECTION 10

SPACE FRAME ANALYSIS

10.1 INTRODUCTION

The three-pile structure in this section has satisfied the preliminary design procedures described previously (from SECTION 2 to SECTION 9). The main objective of the space frame analysis is to confirm the integrity of the proposed structure subjected to specified environmental conditions.

The space frame analysis set forth herein utilizes the available computer programs available at Synercom Technology, Inc., Houston, Texas. The program processing procedures are as follows:

- (1) Set up SEALOAD-2 program to obtain desired wind, wave and dead weight (including buoyancy effect) loadings on the structural components.
- (2) Update loadings in Step (1) due to additional dead weight and live loads on the structure.
- (3) Perform space frame analysis by using STRAN computer program.

The program printouts are presented in A.5 Space Frame Analysis in APPENDIX A.

By C. P. L. Client U.S. Navy Project Shipboard Concept Analysis
 Date 12/12/01 Job No. 02-01-02 Calculation Shipboard Analysis

10.2 INPUT DATA

1. SEA-DEAL Program will calculate wind and wave, dead weight, structure adjusted by the buoyancy effect.
- *2. Addition of wind and wave forces due to boat landings and stairways --- input as joint loads
- *3. Additional dry weight of the superstructure:
 - a. Secondary deck beams (joists)
 - b. Floor plates
 - c. Handrails, kickplates, safety nets, etc.
 --- input as joint loads
- *4. Line loads on top deck and equip. on decks

LOADING NAME DESIGNATIONS :

- LOADING 1 WIND AND WAVE (90° App. from +X-AXIS)
 (JACKET & SUPERSTRUCTURE)
- LOADING 2 WIND AND WAVE (270° App. from +X-AXIS)
 (JACKET & SUPERSTRUCTURE)
- LOADING 3 DEAD LOADS (Dry Weight + Buoyancy)
- *LOADING 4 ADDITIONAL WIND AND WAVE (Boat Landings, Stairs)
 + Y-axis

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Sheet 12 of 13

CV 12/1/87 Client U.S. Navy Subject Structural Element Analysis
 Date 12/1/87 Job No. 12-1-87 Calculation Frame Analysis

** Loading 5 Additional Dead Loads (as indicated)

** Loading 6 Live Loads

Loading 7 Combined Loads $= (2-4) + (3-5)$ Max. Tension

Loading 8 Combined Loads $= (1+4) + (3-5) + 6$
 Max. Compression

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Sheet 2 of 2

By S. C. C. Co. Client W. C. C. Co. Sup. W. C. C. Co.
Date 1-1-16 Job No. 17-771-72 Calculation W. C. C. Co.

Date 1-16 Job No. 77-77-92 Calculation Done on 10 pages

Loas no 4 Additional Who are Here From B. + L. + S. + S. + S.

(10) $E_{max} = 10.7$ Allow. $PL = 4.206$ FT-KIPS
 $S_{Allow} = 45.4$ KIPS

$$\text{Shear} = 45.4 \text{ kips}$$

Equivalent Conc. Leads at

$$Z = \frac{4.26}{48.4} = 86.9 \text{ FT from wall}$$

Group 100 to 104

№ 4-51

$$f = 76 - 75 = 15'$$

$$f_p = 86.9 - 78 = 8.9'$$

— 10 —

(2) Stairways

Moment at Mullion	= 10.123 FT-KIPS
Shear	= 31.2 KIPS

$$Shear = 31.2 \text{ kips}$$

Equivalent Circ. Load. at

$$\bar{Z} = \frac{10.123}{81.2} = 124.7 \text{ FT for muths}$$

Eq. 11. dist. data at

Index (33) - (55)

$$L = 109 - 100.5 = 28.5'$$

⑤ — ⑥

$$l_f = 124.7 - 100.5 = 24.2'$$

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Sheet 12.15 of 25

By P. Chen Client U.S. Navy Subject Structure, Support Analysis
 Date 4-1-86 Job No. 31-711-12 Calculation Spine Frame Analysis

Load no 3 Harmonic Dead Load

Isolated Deck:

1/4" PL	5,100 #
1/2" PL	4,320 #
Reinforcing Steel Deck	<u>2,000 #</u>
	11,420 #

Uniformly distributed on Beams

11 rows (61) -- (62)	(64) -- (65)	$w = \frac{11,420}{(10.7) \times 3 \times 27}$ $= 0.13 \text{ KIP/FT}$
(62) -- (63)	(66) -- (67)	
(63) -- (64)	(67) -- (68)	
	(68) -- (69)	
	(69) -- (70)	

TOP DECK:

1/4" PL	12,495 #
4' x 3" F.R.	1,684 #
W14x27	3,730 #
C12x25	<u>3,800 #</u>
	21,795 #
Safety Nets	<u>2,000 #</u>
	23,795 #

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Sheet 16 of 25

By C. C. Cline Client 11111111 Subject Structural Con. of Platform
 Date 4-21-77 Job No. 11111111 Calculation Truss Frame Analysis

Equally distributed at 3 leg tips: 7.93 kips

LOADING 6 LIVE LOADS

Deck Deck: 150 PSF

$$\text{Total Live Load} = 150 \times 20 \times 3 = 75000 \text{#}$$

Uniformly distributed on beams

Members (3)-(4) (5)-(6) (7)-(8) (9)-(10)

$$w = \frac{75000}{100 \times 3 \times 1} = 0.86 \text{ KIPS/FT}$$

Top Deck: 100 PSF

$$\text{Total Live Load} = 100 \times 33 \times 33 = 122,300 \text{#}$$

Equally distributed at 3 leg tips: 40.53 kips

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Sheet 15 of 22

By Client U.S. Navy Draw Structural Concept Envelope
 Date Job No 27-2-4-14 Calculation Spec Form Envelope

Revised Coordinates for Points 1, 2 & 3

$$\text{Point 1} \quad x = 14.5 + \frac{155}{6} \cos 30^\circ = 22.37$$

$$y = -6.17 - \frac{155}{6} \sin 30^\circ = -17.25$$

$$z = -6.00$$

$$\text{Point 2} \quad x = -22.47$$

$$y = -12.15$$

$$z = -6.00$$

$$\text{Point 3} \quad x = 0$$

$$y = 16.74 + \frac{106.5}{6} = 34.44$$

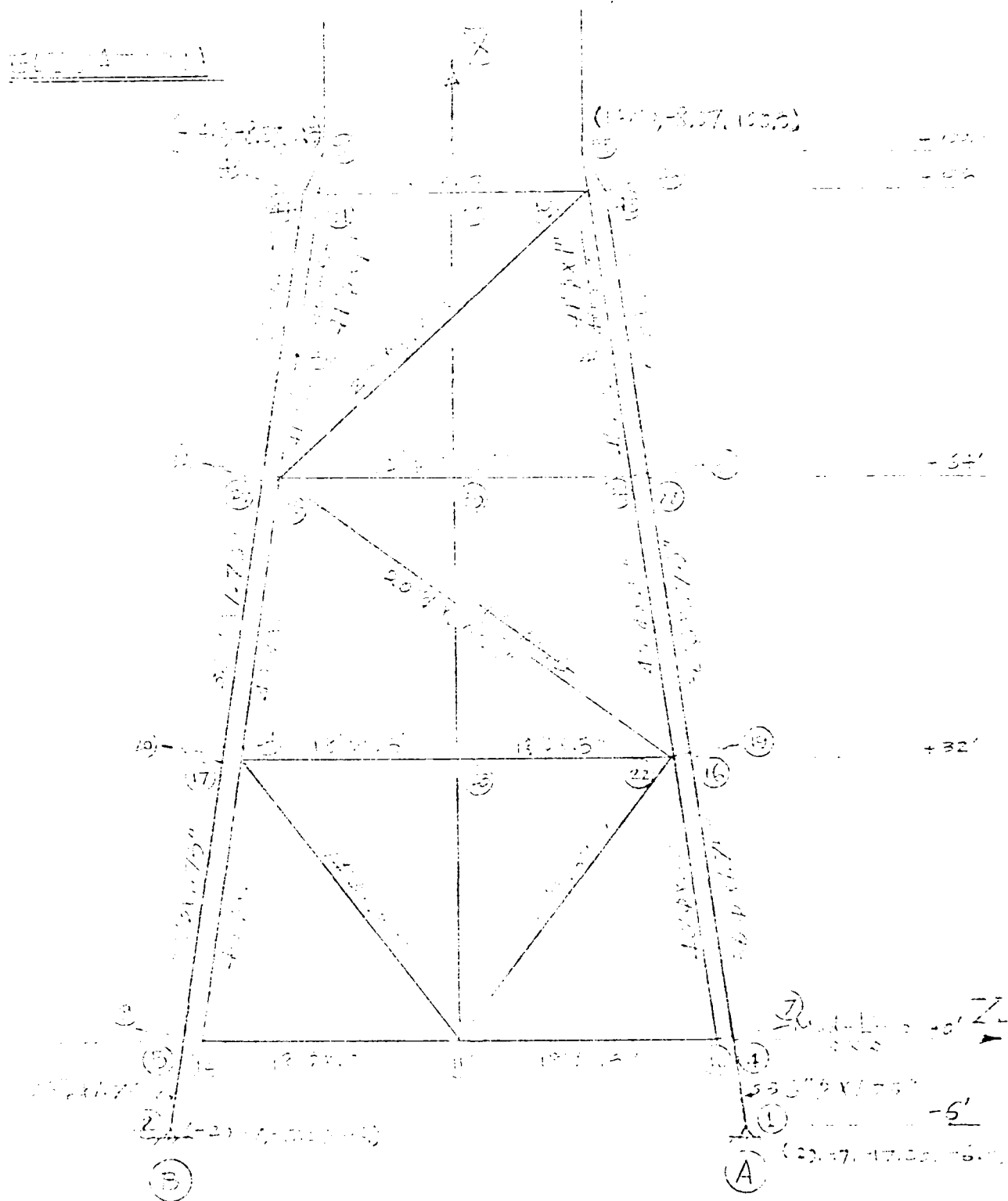
$$z = -6.00$$

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Sum. 12. 2. 2. 2.

By P. J. Gaudin, Client H. R. Hiltner, cos., or National Grace & Lytle
Date Feb 7 1968, Cos No. #70125-1-1, Calculation Line Item Addition

Date 2-2-1965 No 27-11-1965 Calculation 1-1-1965



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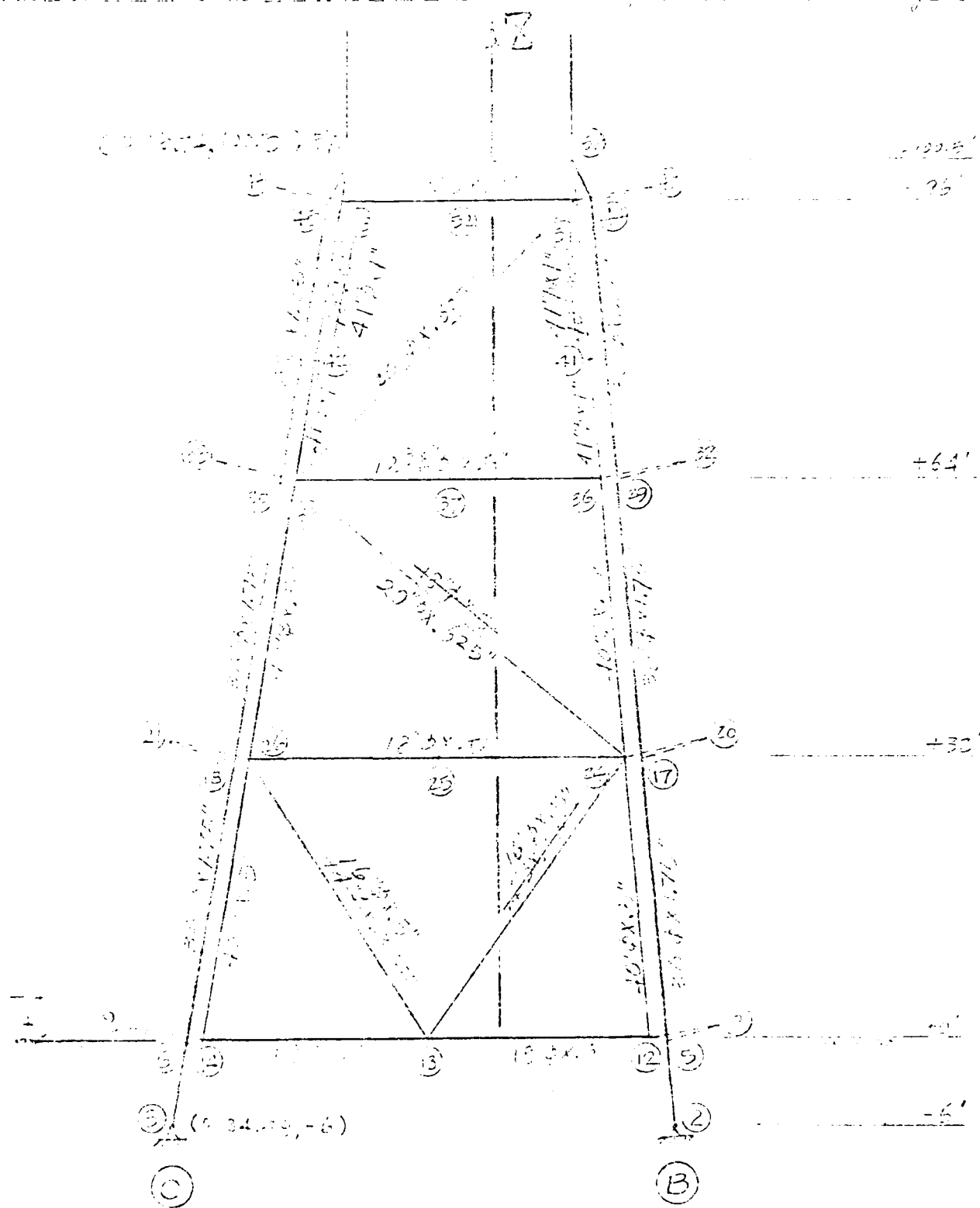
Sheet 10 of 22 -

Dr. S. K. Ghosh, Chair - IIT Madras
Date: April 16, 2013
Page No. 27 of 92

Topic: Structural Concept Analysis
Calculation: Space Frame Analysis

Date 4-1-72 Doc No 22-371-72

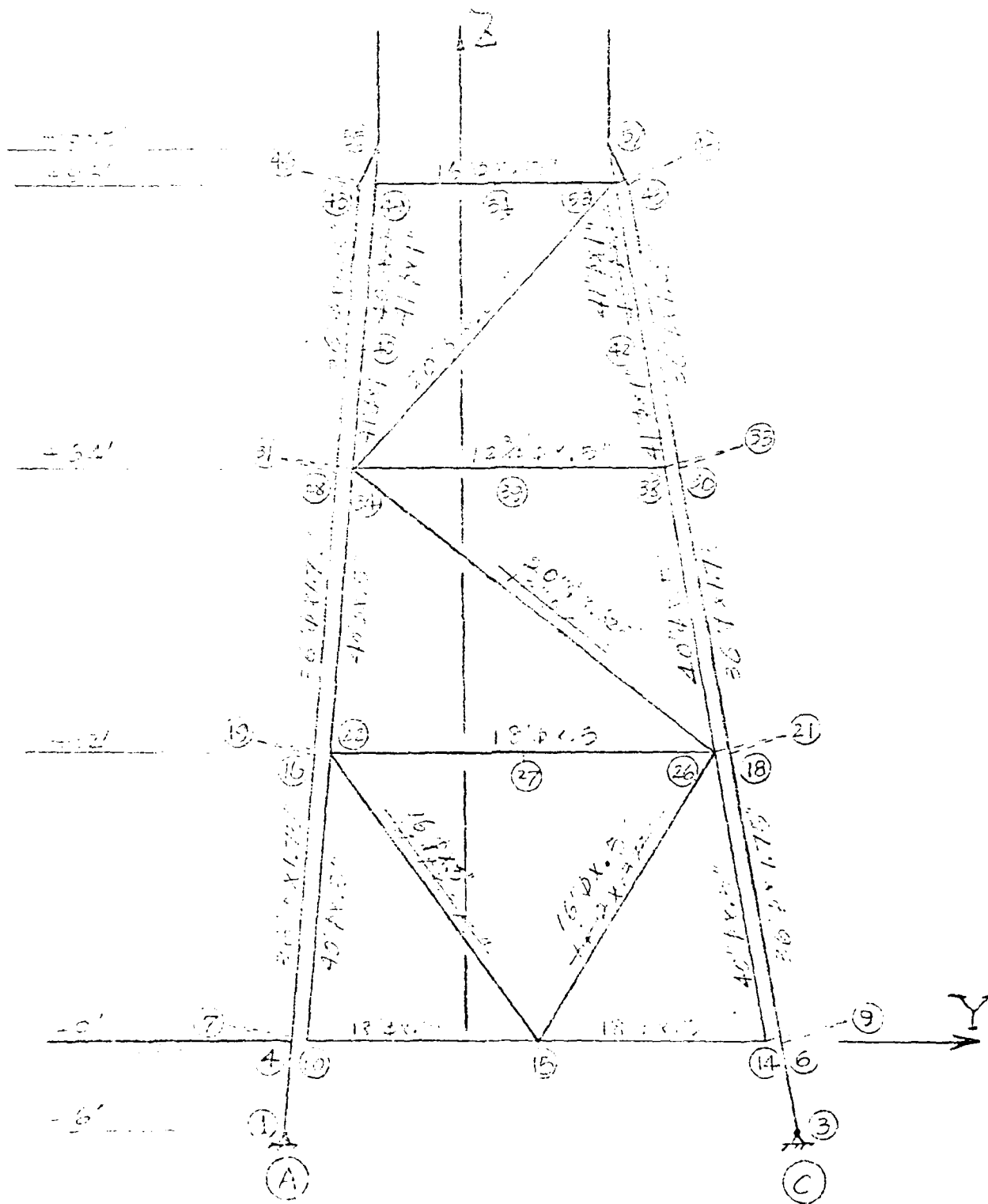
Calculations: space frame analysis



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Sheet 1 of 2

Project: 115-114-11 Station: Station 1, Center of Gravity
 Date: 4-1-76 Job No. 22-724-9E Calculation: Spine Frame Analysis



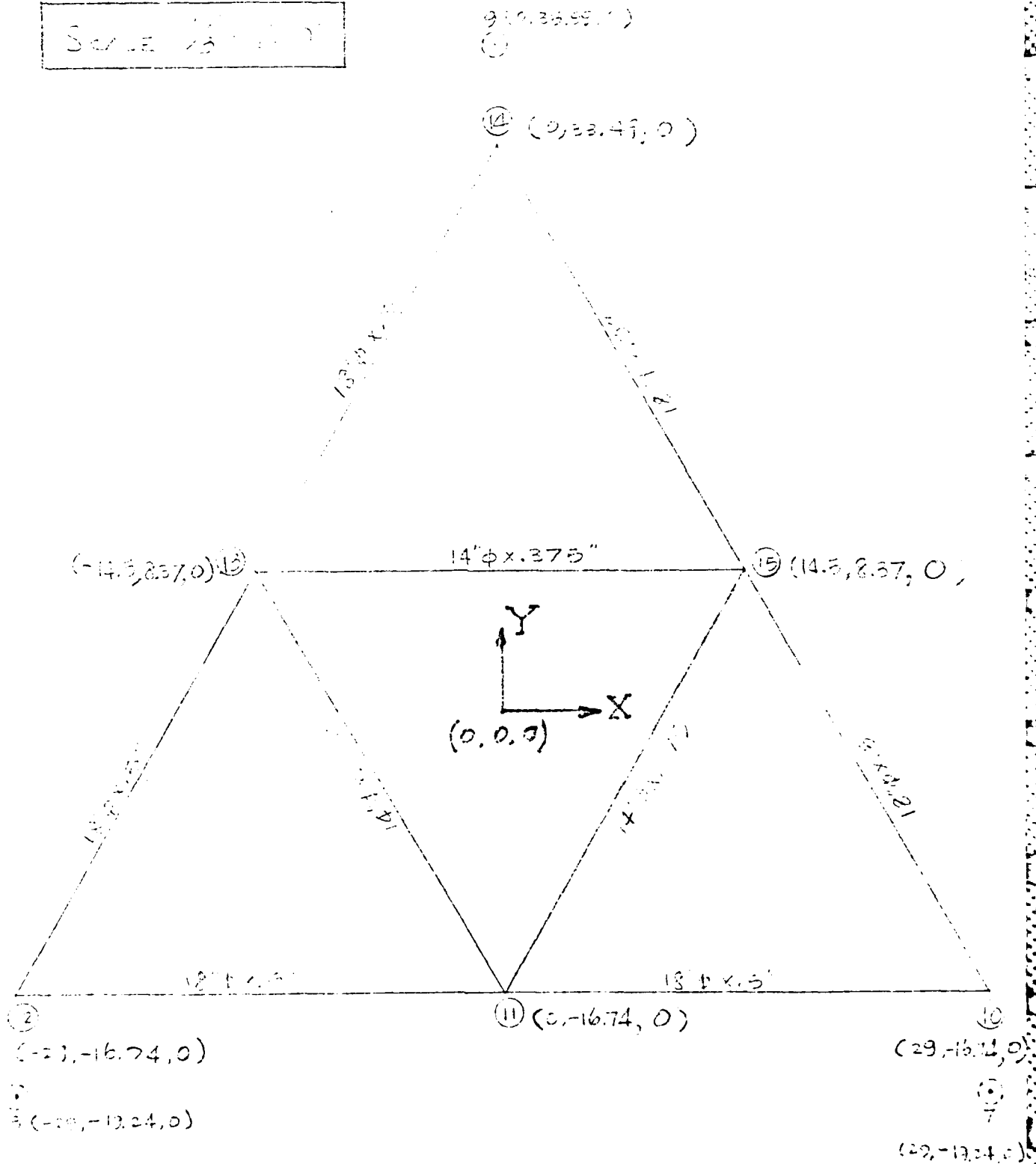
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Sheet 19-JL of 22

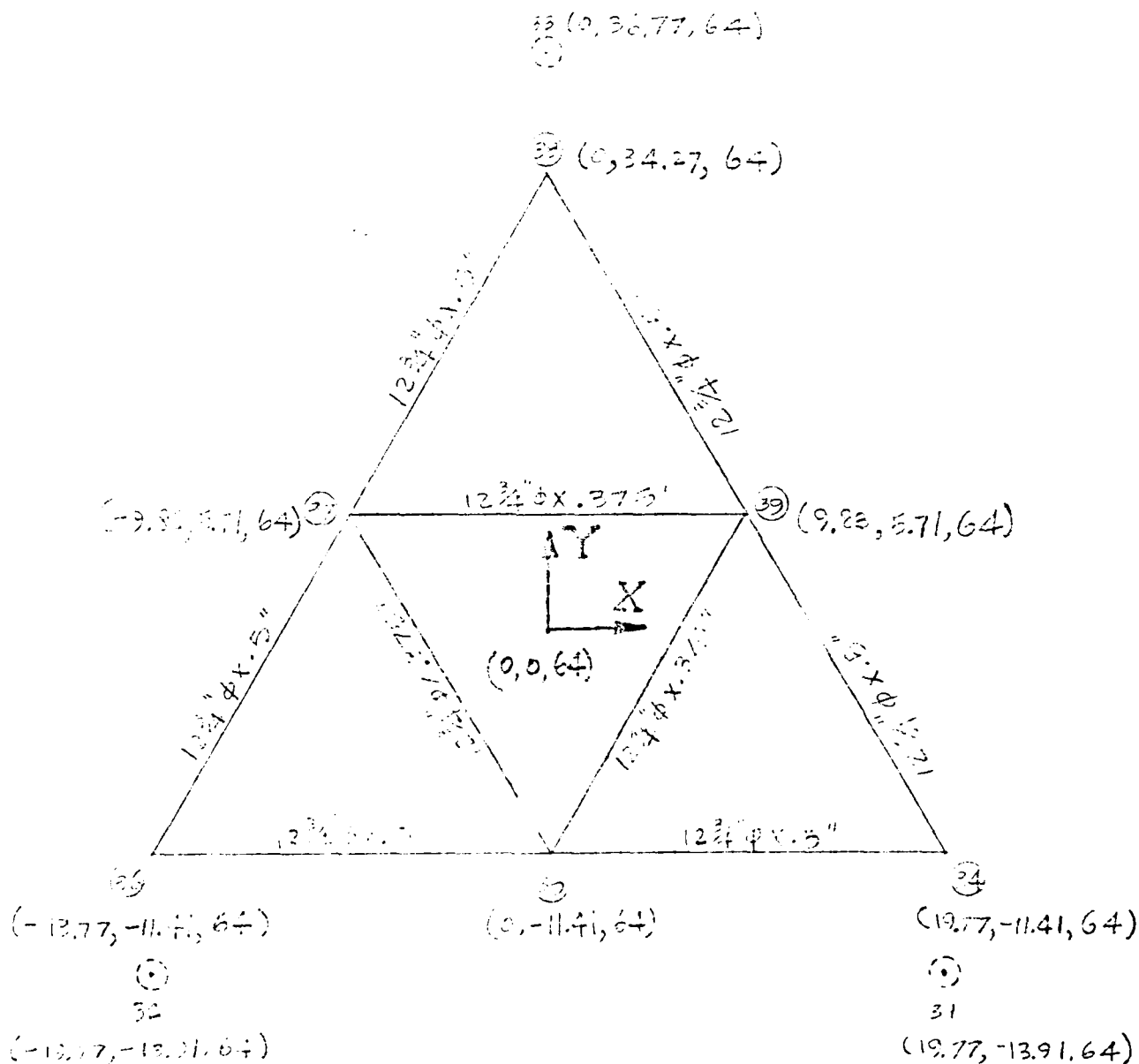
By SEA Client U. I. B. I. Subject Structural Concept Development
 Date 3-26-72 Job No. 27-726-92 Calculation Span Frame Analysis

PLAN

SCALE 1/8" = 1'-0"



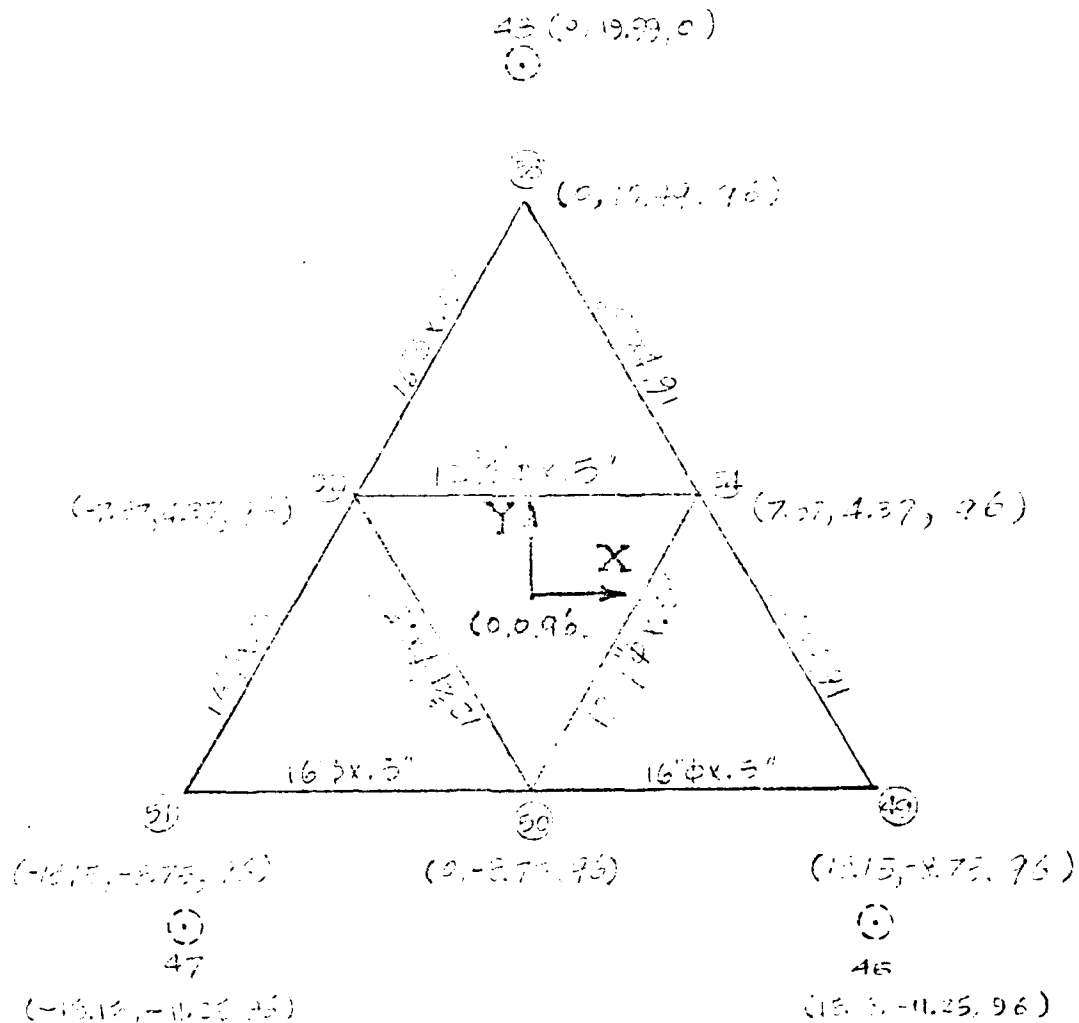
by C. L. [unclear] Date 11-21-92 Subject Structural Concept Analysis
 Date 12-2-92 Job No. 27-241-92 Calculation Space Frame Analysis



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Sheet 15 of 21

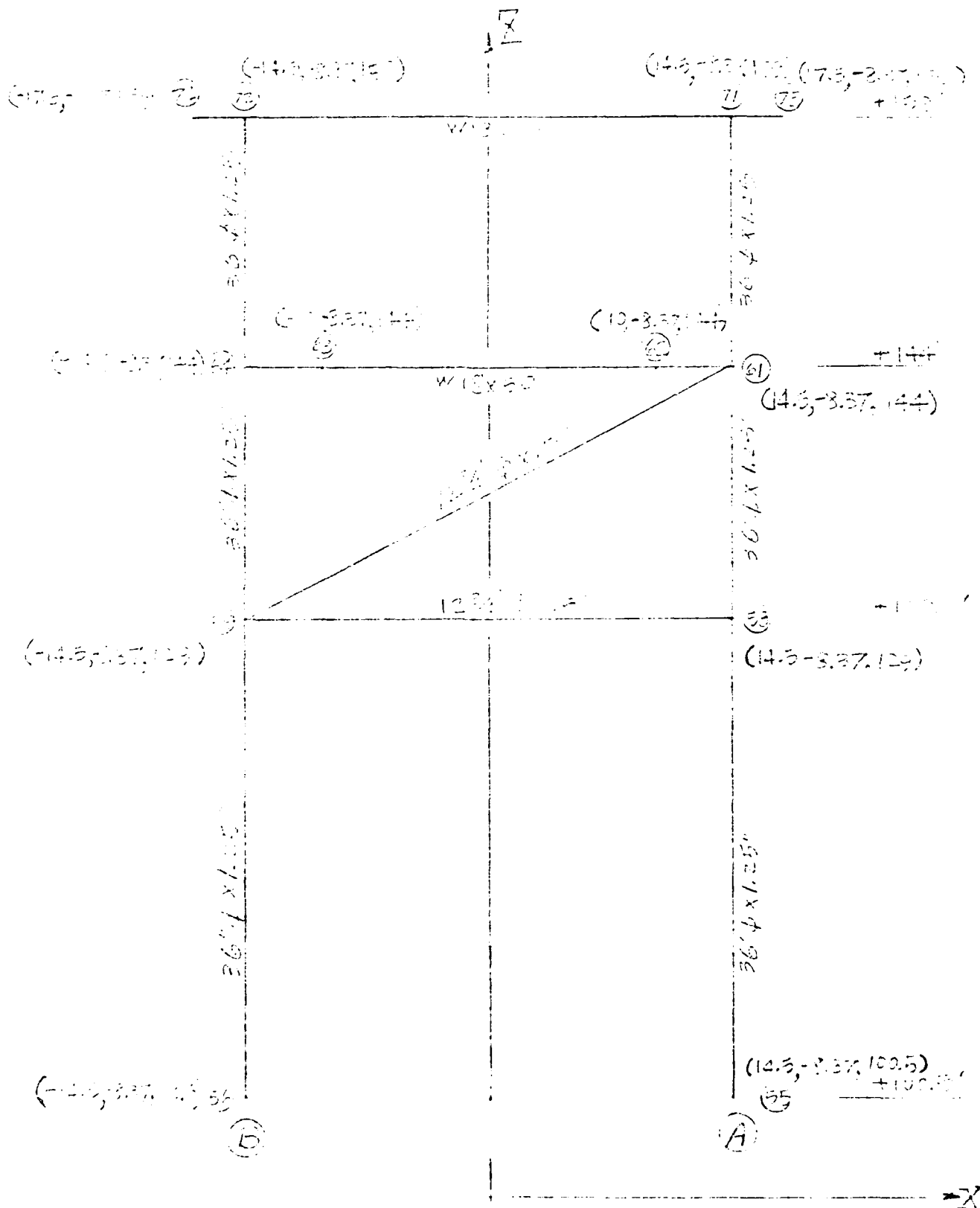
By C. Chou Client AT&T Subject Structural Concept Analysis
 Date 4-26-72 Job No. 80-1114 Calculation Space Frame Analysis



CREST OFFSHORE, INC.

Sheet 10.15 of 22

Client U.S. Navy Subject Structural Concept Analysis
 Date 1-27-92 Job No. 27-121-92 Calculation Space Frame Analysis

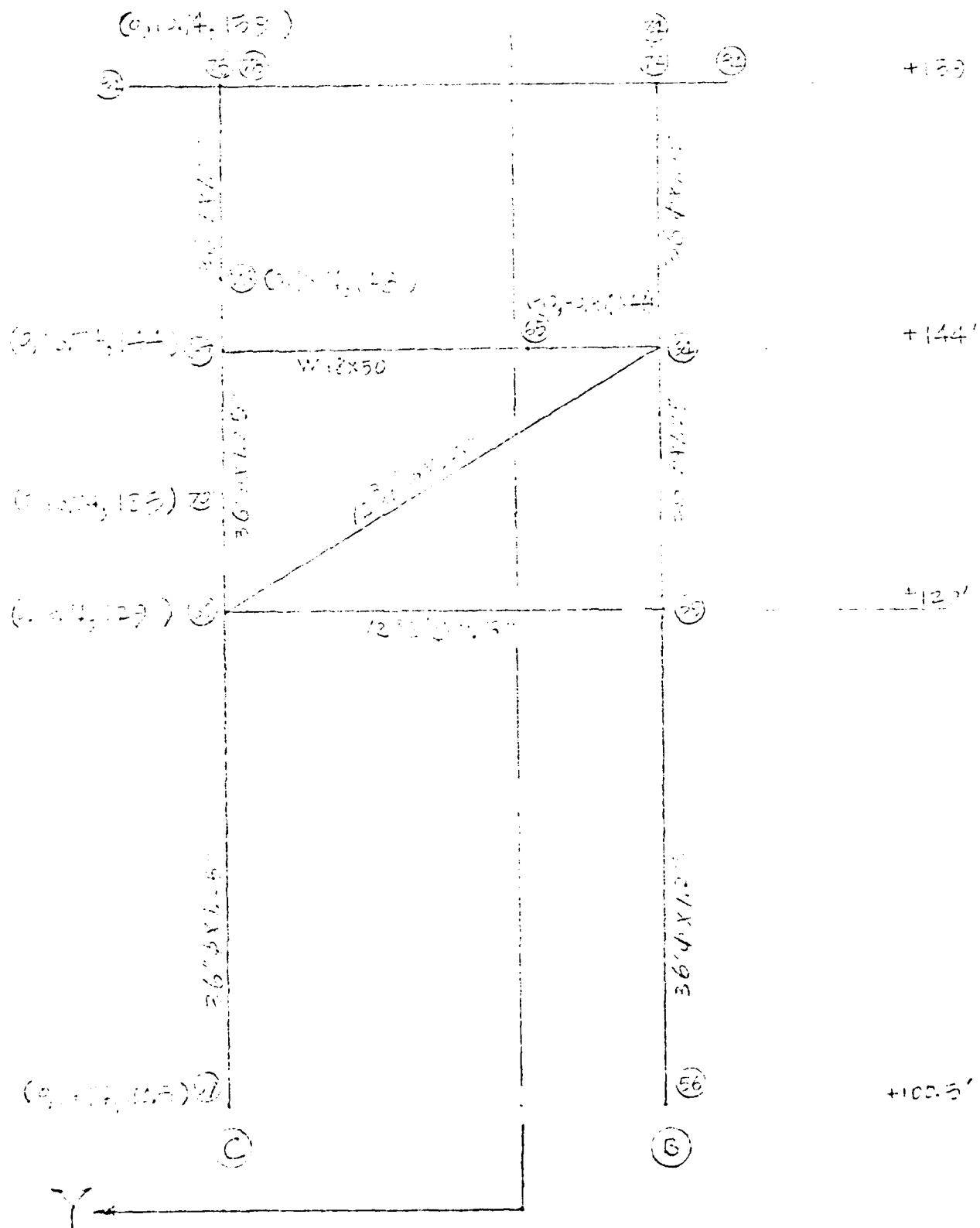


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Sheet 28 of 32

By C. J. [unclear] Client U.S. Navy Subject Structural Concept Analysis
 Date 4-12-76 Job No 27-771-72 Calculation See Figure 1-2

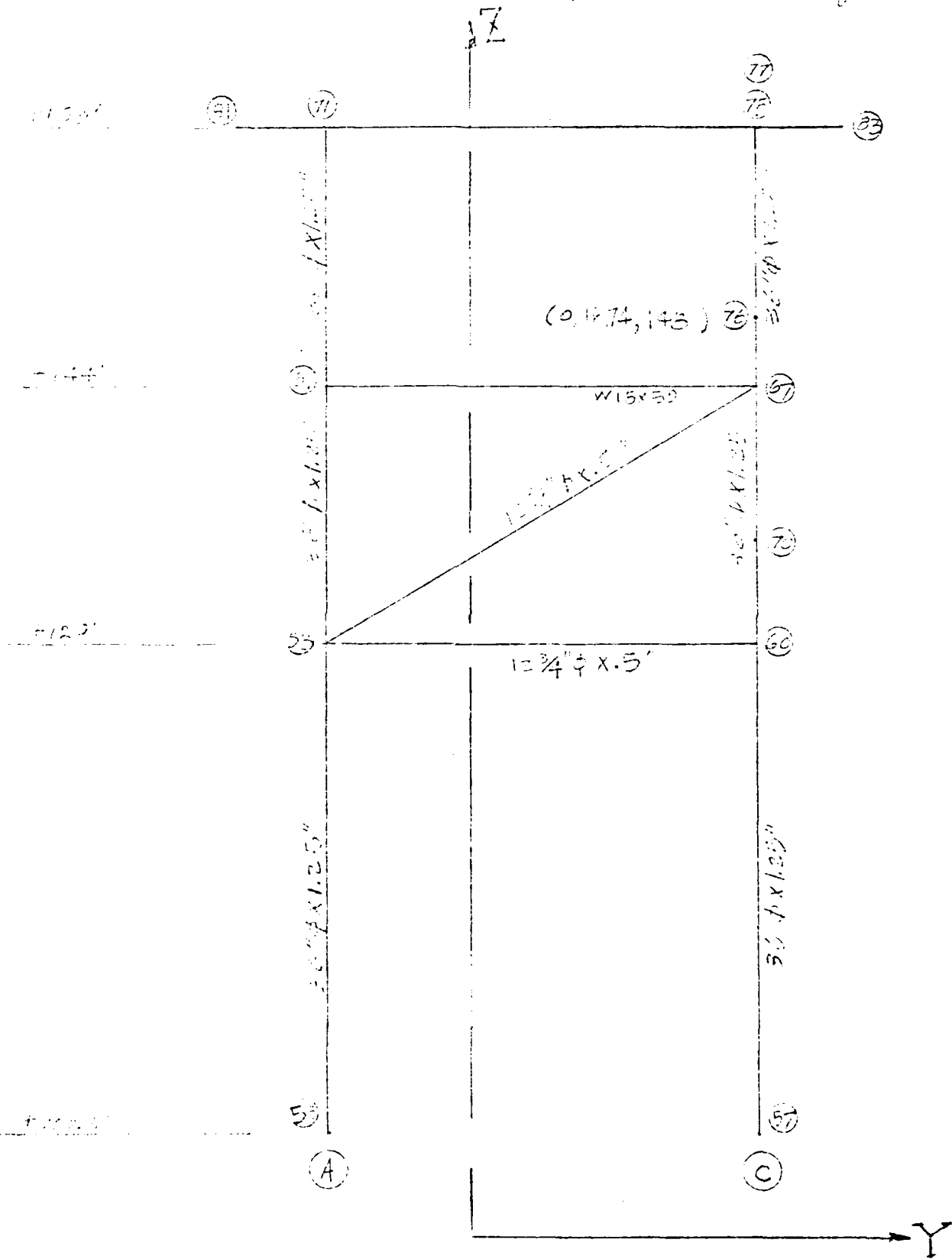
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Sheet 12.17 of 22

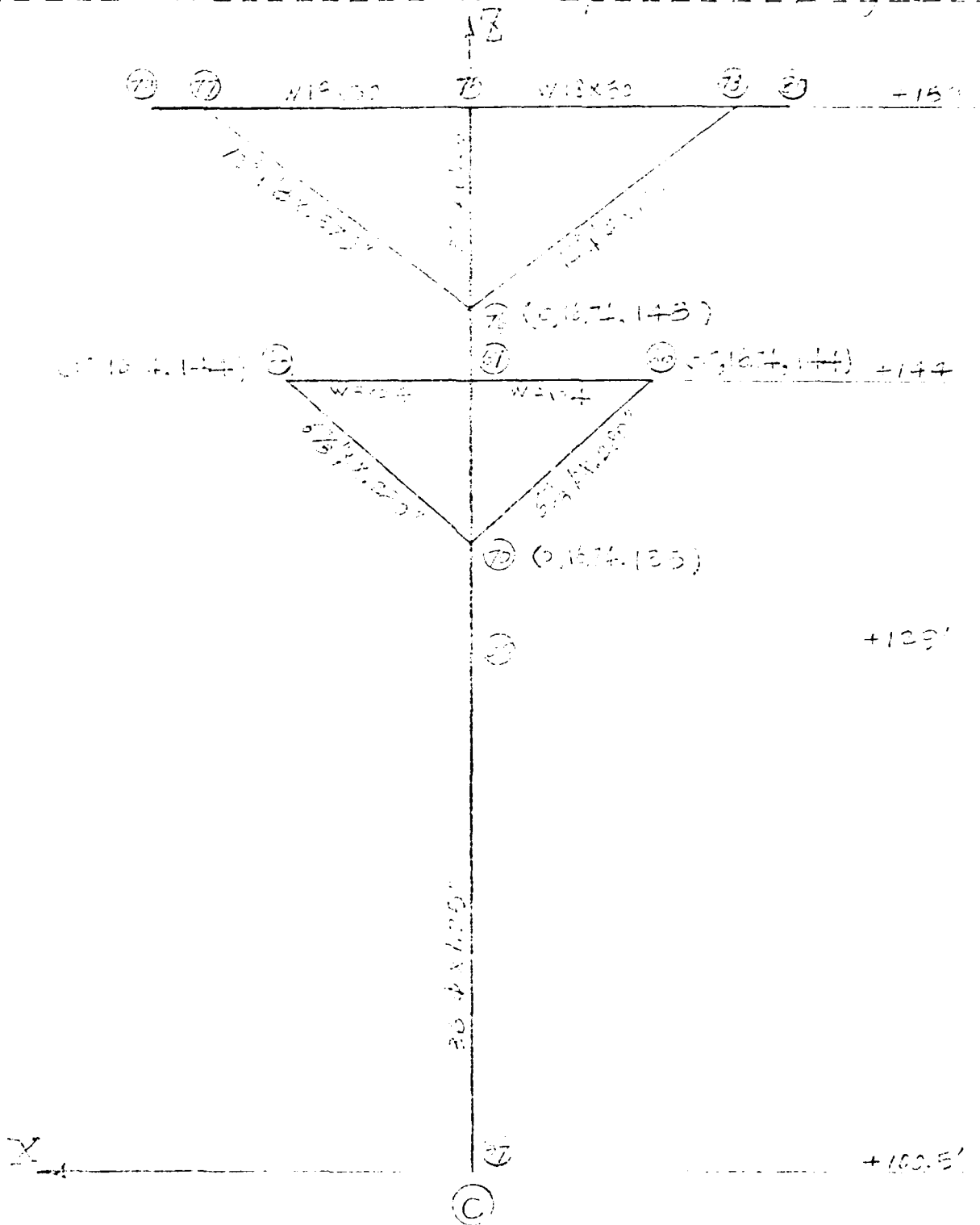
by C. C. ... Client U.S. Navy Subject Design of Concept Analysis
 Date 1-27-72 Job No. 27-27-12 Calculation Space Truss Analysis



CREST OFFSHORE, INC.

Sheet 15 of 22

By C. J. [illegible] Client U.S. Navy Subject Structure Line at Annapolis
 Date 7-2-73 Job No. 27-77-93 Calculation Splice Line - E - 1/2



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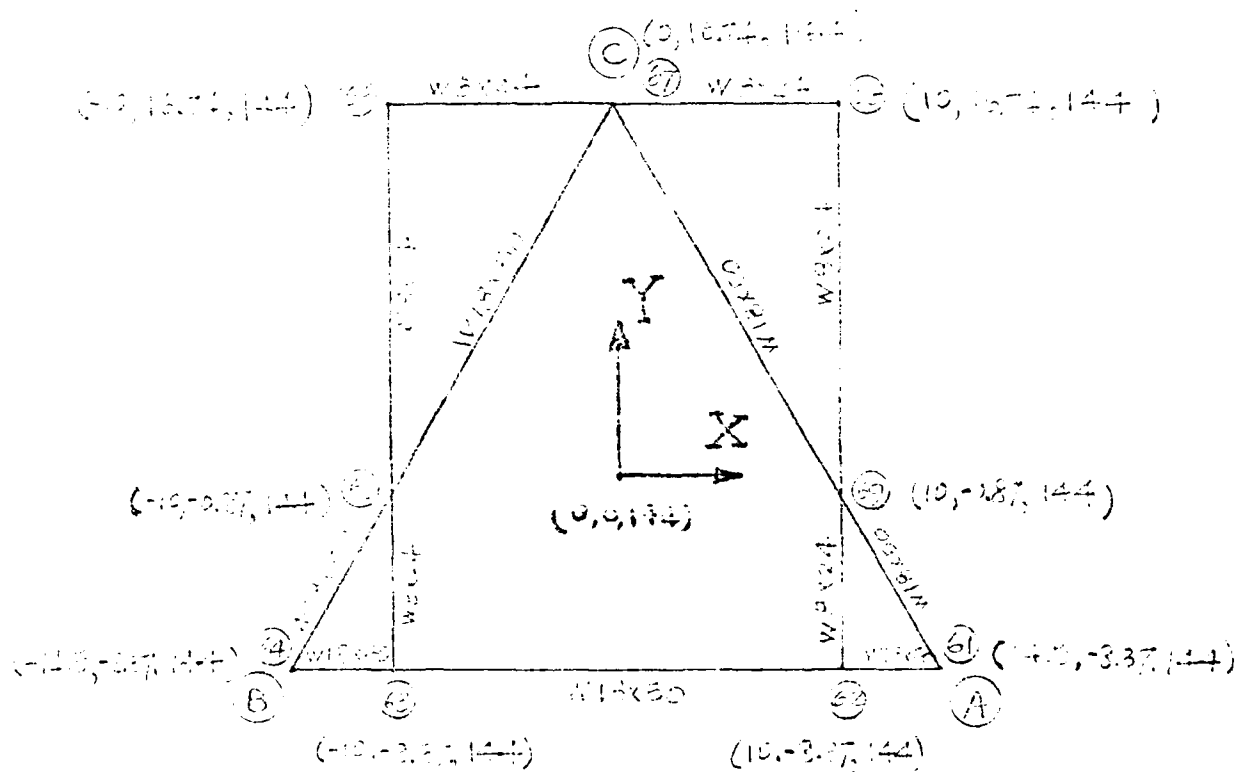
Sheet 1 of 2

By S. S. S. S. Object U.S. 1111

Subject Struct. Analysis

Date 1-1-73 Job No. 1111-73

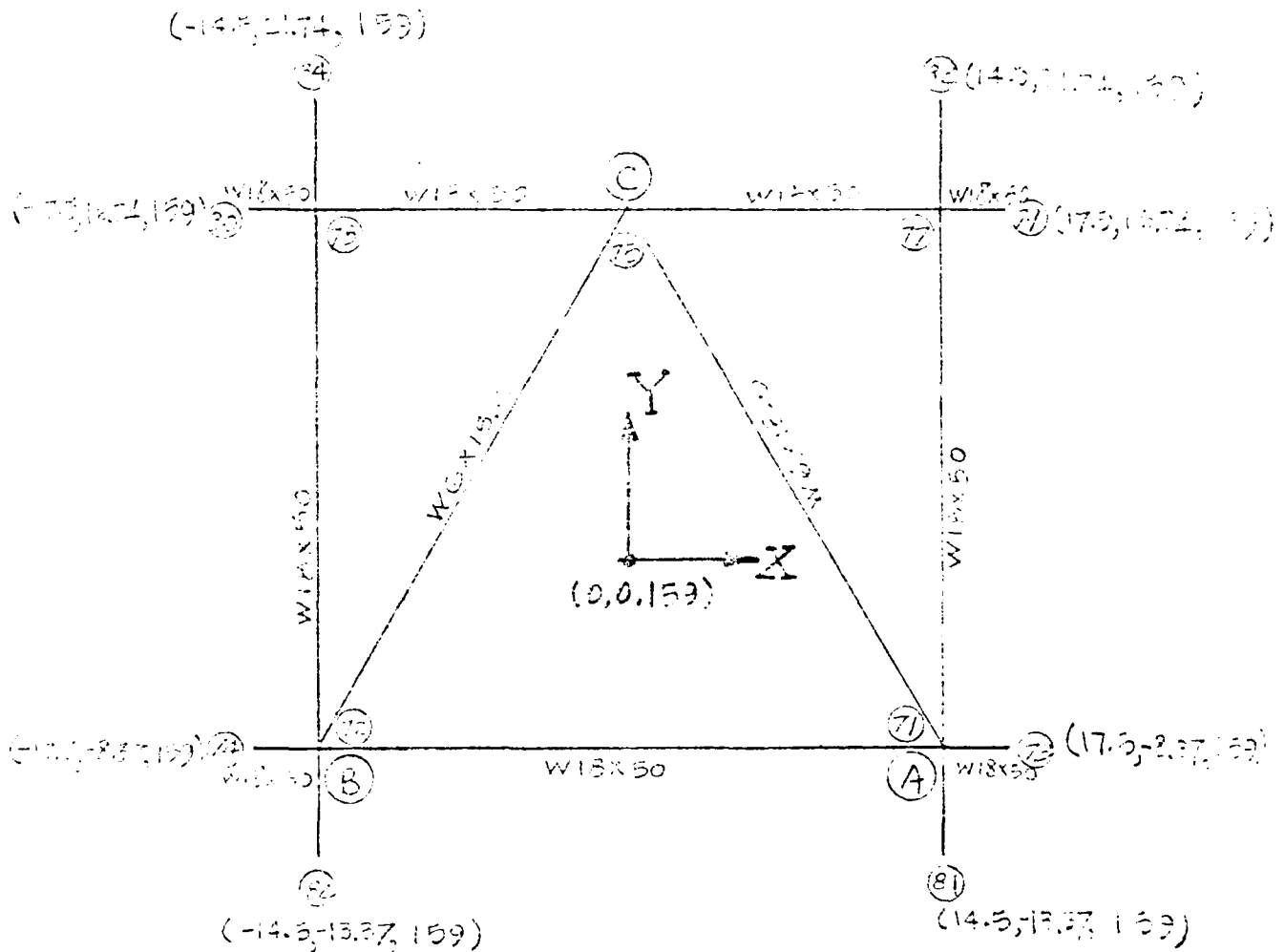
Calculation Spec. Form Analysis



CREST OFFSHORE, INC.

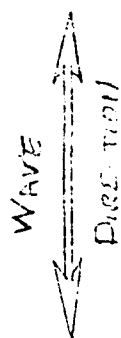
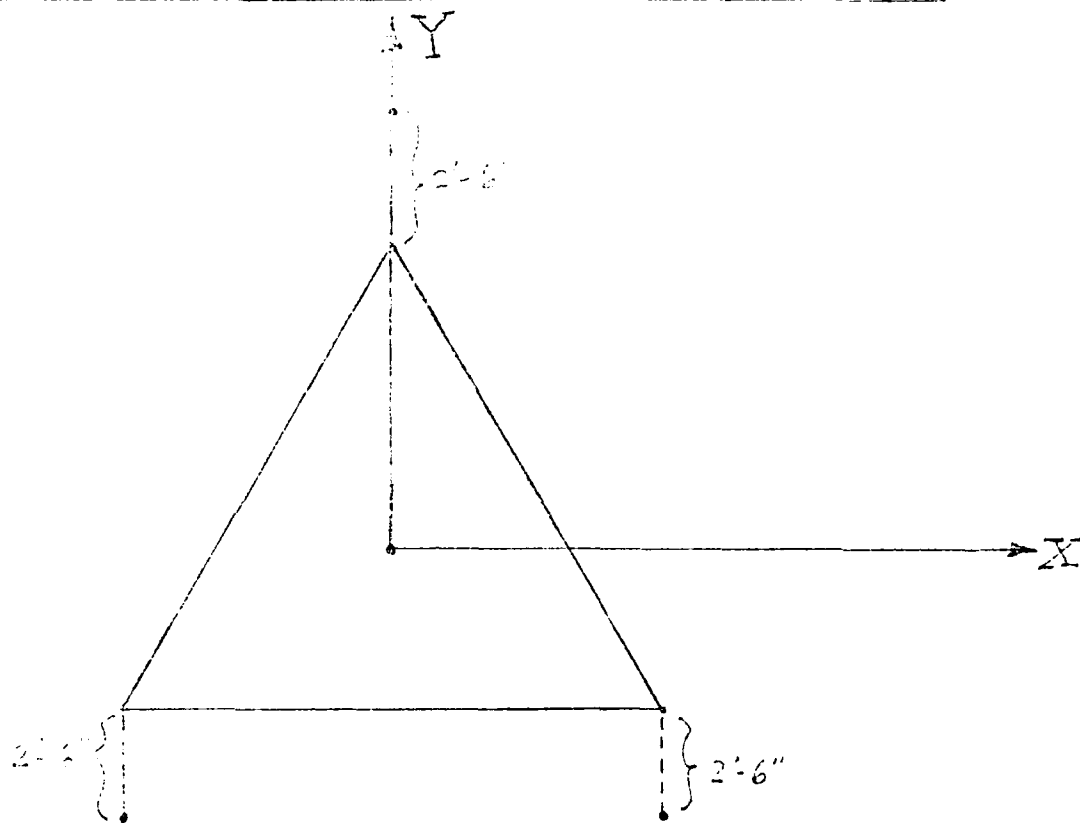
Sheet 11 of 22

By C. Schmitt Client U. S. Navy Subject Structural Analysis of Platform
 Date 1-5-74 Job No. 27-III-14 Calculation Splice Force Analysis



by S. S. Chen Client U.S. Navy Construction of Concept Analysis
 Date Feb 26 Job No. 27-101-11 Calculation Apr 11, 1964

Joint Coordinates for Wishbone Junction Point



By A. J. [illegible] Client 11-11-11 Subject 11-11-11
Date 4-11-11 Job No. 17-11-11 Calculation 11-11-11

10.5 RESULTS OF ANALYSIS

(i) Loads on Piles

Maximum Tensile Force = 1450 KIPS

Maximum Compressive Force = 1350 KIPS

According to Pile Capacity Curves shown on Page 3.8) for 36" O.D. pipe piles, the proposed 180 ft of penetration is acceptable.

(ii) Member Stresses

Stresses on each structural component are in acceptable range under design environmental conditions.

(iii) Deflections

The maximum deflection at the top deck (EL. +75'-0" from MLW) is at 6.8 inches under most critical environmental conditions.

SECTION 11
CORROSION PROTECTION

11.1 INTRODUCTION

API Recommendations for corrosion protection serve as the base for selecting the protection methods in this section.

Project: Crest 11.2 of 12 - Supplemental Concept Analysis
 Date: 11/11/73 Job No: 11-771/1-1 Calculation: Corrosion Protection

11.2 API RECOMMENDATIONS

CORROSION PROTECTION

2.12 Zone Definition. The surface area of a platform is divided into three zones for corrosion protection considerations. These zones are:

- Splash Zone.** That area extending 6 feet above high lunar tide to 4 feet below low lunar tide.
- Atmospheric Zone.** That area above the splash zone.
- Submerged Zone.** That area below the splash zone.

2.13 Protection in Splash Zone. The splash zone area shall be protected by one of the following methods:

- Extra steel in excess of that needed for strength.
- Noncorrosive metallic wrap.
- Coatings.

2.14 Protection in Atmospheric Zone. All steel surfaces in the atmospheric zone should be protected against corrosion. Proper surface preparation and application of materials selected will prove most economical. Various paint systems and galvanizing have proved satisfactory. Application procedures should follow the manufacturer's recommendations closely.

2.15 Protection in the Submerged and Buried Zones. One of the following modes of cathodic protection should be used to protect the structure in the submerged zone:

- Sacrificial anodes.
- Impressed current.

2.16 Selection of Method to be Used. Either of the systems (or their combination), if properly designed, installed, and maintained will satisfactorily protect the submerged portion of the platform. The proper selection will depend upon due consideration of the requirements imposed by the size of the platform, water depth, connecting pipe lines, availability or nature of electric power, and personnel assignments. Sacrificial anodes may add a significant amount of weight to the structure which must be considered when designing for launching and installation. For impressed current systems, qualified personnel are required to monitor and maintain the system continually, and a continuous source of electrical power is required from the beginning to develop initial polarity and prevent corrosion.

2.17 Current Requirements. The corrosivity of the environment and the current required to achieve complete protection depend on the environmental variables which affect oxygen availability at the steel surface. The most important variables are: (1) water velocity, (2) water depth, (3) water temperature and salinity, and (4) the ability to deposit calcareous deposits on the surface.

The initial minimum current densities recommended for the submerged zone (the total exposed area between the water surface and the bottom) are:

Area	Current Density mA/ft ²
Gulf of Mexico	5-6
West Coast of United States	7-8
Cook Inlet	35-40

These values are adequate if the anodes are properly distributed throughout the submerged zone, and this can generally be achieved with sacrificial anodes. Since the output of impressed current anodes is much higher and their number is less, the distribution is less efficient and these values should be increased by a factor of 1.25-2.0.

In addition to the above, current should be applied for protection of the steel in the soil. The requirement for the soil zone (the total exposed area of the jacket, piles and drive pipe in the soil) is 1-2 mA/ft². The well casing should be protected with the application of an additional 3 amperes per well. Due consideration should be given to the effect of connecting pipelines and risers to the platform.

Project: CREST OFFSHORE
 Date: 4-23-76 Job No. 27-1771-73

Subject: Structural Corrosion
 Calculation: Corrosion Protection

2.3 System Design

a. Sacrificial Anodes. The design of a sacrificial system involves establishing the total weight of alloy required and a distribution which will effectively disburse the current throughout the area to be protected.

1. Total Weight

$$W_t = \frac{I \times N \times 8760}{C}$$

where:

W_t = Total weight of alloy (lbs)

I = Total current requirement (amps)

N = Desired life (years)

C = Capacity of alloy $\frac{\text{amp-hrs}}{\text{lb}}$

Capacities of some of the more common alloys at loadings of 200-700 mA/ft² are:

Alloy	C
Zinc (Mil-A-18601H)	370
Aluminum-Zinc-Mercury	1250-1290
Aluminum-Zinc-Indium	760-870
Aluminum-Zinc-Tin	420-1130

The differences shown within any one grouping are attributed to variations in both composition and heat treatment offered by the various suppliers.

Note: The anode selected should have a minimum closed circuit driving voltage of 1160 mv.

2. Anode Configuration. Neglecting the effects of any corrosion products, the current which an anode can deliver is a function of the anode/electrolyte resistance, R_a , and the potential difference between the anode and cathode, E_c . R_a can be determined from a modification of Dwight's formula:

$$R_a = \frac{0.0625 \rho \left(\ln \frac{4L}{r} - 1.0 \right)}{L}$$

where:

L = length of anode (inches)

r = equivalent radius (inches)

ρ = resistivity of electrolyte (ohm-cm) at the anticipated water temperature

For other than cylindrical anode shapes:

$$r = \sqrt{\frac{\text{cross sectional area}}{\pi}}$$

A weight/anode configuration relationship should be selected which will permit the

sacrificial alloy to be consumed over the desired life. This can be expressed as:

$$N = \frac{C \times W_t}{8760 \times E_c R_a}$$

It is customary to assume $E_c = 0.250V$ and to calculate R_a based on the dimensions of the anode at 40% consumption.

3. Location. The anodes should be positioned throughout the platform in relation to the area of steel to be protected. Since the efficiency of most sacrificial alloys is adversely affected when covered with mud, attachment of anodes to structural members at the mud line should be avoided.

4. Method of Attachment. Anodes may be welded to structural members using stand-offs or flush-type pads. If the standoff method is used, a minimum of 12 inches between the anode and adjacent steel should be allowed, and the connections should be designed to withstand the installation loads caused by launching and pile driving and the environmental loads during the life of the anode. The flush-type anode should incorporate a dielectric shield which extends a minimum of 12 inches outward from the perimeter. Tack welding or set screws may be used to establish electrical continuity if a clamp-type connection is used.

b. Impressed Current. The design of an impressed current system involves selecting the anode material, determining the optimum methods of attaching the anodes to the structure, and assuring the reliability of associated electrical hardware (rectifiers, anode lead wire, etc.).

1. Anodes. Unless the system is designed for replacement, the anode material must function for the expected life of the structure. Some materials used at this time and pertinent properties are listed in the following table:

Material	Rate of consumption, lb/A yr	Max. Current Density, A/ft ²	Maximum Potential, Volts
Lead silver alloy	0.1-0.2	15-20	100 +
Lead w/ platinum pins	0.003	15-20	100 +
Platinum over Titanium	0.000013	100 +	8
Platinum over Niobium	0.000013	100 +	40-50
Platinum over Tantalum	0.000013	100 +	200

2. Method of Attachment. Impressed current anodes may be permanently fixed to the structure during construction, run through protective conduits which are installed in the fabrication yard, suspended by their lead wire or by a plastic rope supported on a shielding composition fitting which is screwed or flanged to the protective conduit, or mounted on bottom-supported sleds. The installation must be designed to withstand the environmental forces as well as the

By S. C. Chen Date 4-24-77 Job No. 27 776 94 Subject Structure of Concentration
Calculation Current Protection

special conditions imposed by high electrical potentials and currents. Dielectric shielding material which can withstand the caustic/chlorine, high current density environment should be used as a barrier on the steel adjacent to the anode to prevent maldistribution of the protective current.

3. Placement of Anodes. The anodes should be positioned so that all portions of the structure are adequately protected. With the smaller output anodes (30-50 amperes) current "throw" is in the range of 25 to 50 feet while a projection of 60 to 70 feet is possible with the 200 ampere anodes if properly shielded.
4. Conductor. If oil-immersed rectifiers are used, cross-linked polyethylene (XLP) insulated conductors should be specified, because it will not deteriorate on contact with transformer oil.
5. Rectifier. The rectifier(s) should be sized to deliver the anticipated current output of the anodes; however, some oversizing of the rectifier to permit higher current densities during polarization may be desirable. The rectifier voltage should be adequate to overcome the resistance of platform wiring and anode lead, the anode/electrolyte resistance and the back EMF of the anode.

2.49 Monitoring. Potential surveys should be conducted periodically to assure that the structure is adequately protected. A potential of -0.85 volts with reference to a Cu/CuSO_4 electrode (-0.80 volts Ag/AgCl or $+0.25$ volts to zinc) is the accepted criterion for protection. The reference cell should be relatively close to the protected steel when the measurements are made. Permanent zinc or Ag/AgCl reference cells can be installed, but polarization of such cells should be checked. Rectifier outputs on impressed current systems should be checked weekly to determine if the rectifiers and anodes are operating satisfactorily. When problems are encountered, immediate steps should be taken to restore protection.

2.50 Record Keeping. When a structure is installed, a cathodic protection system file should be set up at the location responsible for design. This file should contain drawings of the structure showing the position of all anodes. In the case of impressed current systems, the drawings should also show the location of all rectifiers and wiring. This file should also contain a record of all potential surveys, rectifier current/voltage readings, and any repairs made to the system.

CREST OFFSHORE, INC.

Spec. 11-25-12

W.C. Cline, Client U.S. Navy

Subject Design of Corrosion Protection

Order 4-23-75 Job No. 27-771-1

Calculation Corrosion Protection

11.3 DESIGN DATA

Zones for Corrosion Protection:

- a) Splash Zone: From 80' to 84' above mud-line
(84' MLW)
- b) Atmospheric Zone: 73' (above mud-line) and up
- c) Submerged Zone: 0' to 30' (above mud-line)
0' to 130' (below mud-line)

Current Requirements:

Current Density = 6 mA/24" of surface in water

2 mA/24" of surface in mud zone

Design Life:

10 yrs

CREST OFFSHORE, INC.

Sheet 11-25 of 25

By S. J. [illegible] Client U.S. NAVY Subject Structural Conceptual
 Date 1-1-77 Job No. 27-77-01 Calculation Crane Position

11-4 SUBMERGED ZONE

A. WATER ZONE

MEMBER SIZE	MEMBER LENGTH (DEG.)	SQUARE AREA	NO. REQUIRED	TOTAL AREA	NOTES
	FT	SQ. FT		SQ. FT	
41/2 x 1 WT	36'-0"	386.42	3	1,159.26	Jkt Leg
40 x 3 WT	46'-0"	421.71	3	1,445.13	Jkt Leg
12 x 3 WT	58'-0"	273.52	3	219.96	Midline Leg
42 x 3 WT	28'-0"	106.29	3	318.87	
8 x 3 WT	48'-9"	222.73	3	689.19	132' M/L
14 x 3 WT	24'-4"	89.17	3	267.52	"
12 x 3 WT	33'-6"	131.85	3	395.55	64' M/L
10 x 3 WT	19'-0"	65.92	3	197.76	"
6 x 3 WT	40'-2"	168.29	6	1,010.34	0-32' M/L V.
2 x 3 WT	64'-3"	235.36	3	356.08	32'-64' M/L V.
20 x 3 WT	23'-3"	123.94	3	371.82	64'-81' M/L V.
				7,531.48	

CREST OFFSHORE, INC.

Sheet 11 of 13

By C. Chiles Client U.S. Navy Sub Electrical Dept. Norfolk
 Date 4-23-62 Job No. 27-77-12 Calculation Surface Protection

(3) Mid Zone

Member SIZE	Member LENGTH	Surface AREA	No. REQUIRED	TOTAL AREA	NOTES
	FT	SQ. FT		SQ. FT	
2" X 1/2"	150'	1,526.46	5	3,030.38	Piling

TOTAL CURRENT REQUIREMENTS

$$\begin{aligned}
 I &= 6 \times 7,531.43 + 2 \times 3,030.38 \\
 &= 55,363. \text{ in Amps.} \\
 &= 55.4 \text{ Amps.}
 \end{aligned}$$

CAPACITY OF ALLOY

$$\text{Use } C = 1250 \frac{\text{amp-hrs}}{\text{lb.}}$$

(ANALYSIS - ZINC - MERCURY)

CREST OFFSHORE, INC.

Sheet 11-22-16

By CE Date 11/1/82 Subject Structural Concept Development
 Date 11/1/82 Job No. 11-22-16 Calculation See notes for 11-22-16

Terminal Weight of Tapered Anodes

$$V = \frac{1.1 \times 3760}{C}$$

$$= \frac{55.4 \times 10 \times 3760}{1000}$$

$$= 3,882.4 \text{ lbs}$$

Use 323 lbs anode

$$\text{No of } n = \frac{3,882.4}{323} = 11.9$$

Use 15 @ 323 lbs/anode

4,375#

CREST OFFSHORE, INC.

Sheet 1129 of 12

W.C. Chen, Owner, U.S. Navy, Subject, Structural Analysis of
Date 11/21/72 Job No. 22-7711-92 Calculation, Section Protection

11.5 SPLASH ZONE

Use 0.5 inch extra steel in excess of that
needed for strength.

to C. C. M. Co. U.S. 11/17

subject: Letter to Senator Breaux

Date 11-2-76 Job No 27


Calculation Corrected Net Wt.

JACKET ELEVATION

(TRUE BATTER 1:6)

(APPRANCE BATTER 1:6.931)

Now



(C) (B)

$\triangle A \sim \triangle C$

W.P. EL. 16'-6"

TOP OF JKT. EL. 14'-2"

$$\hookrightarrow EL(+12' - 0')$$

EL. 0'-0"

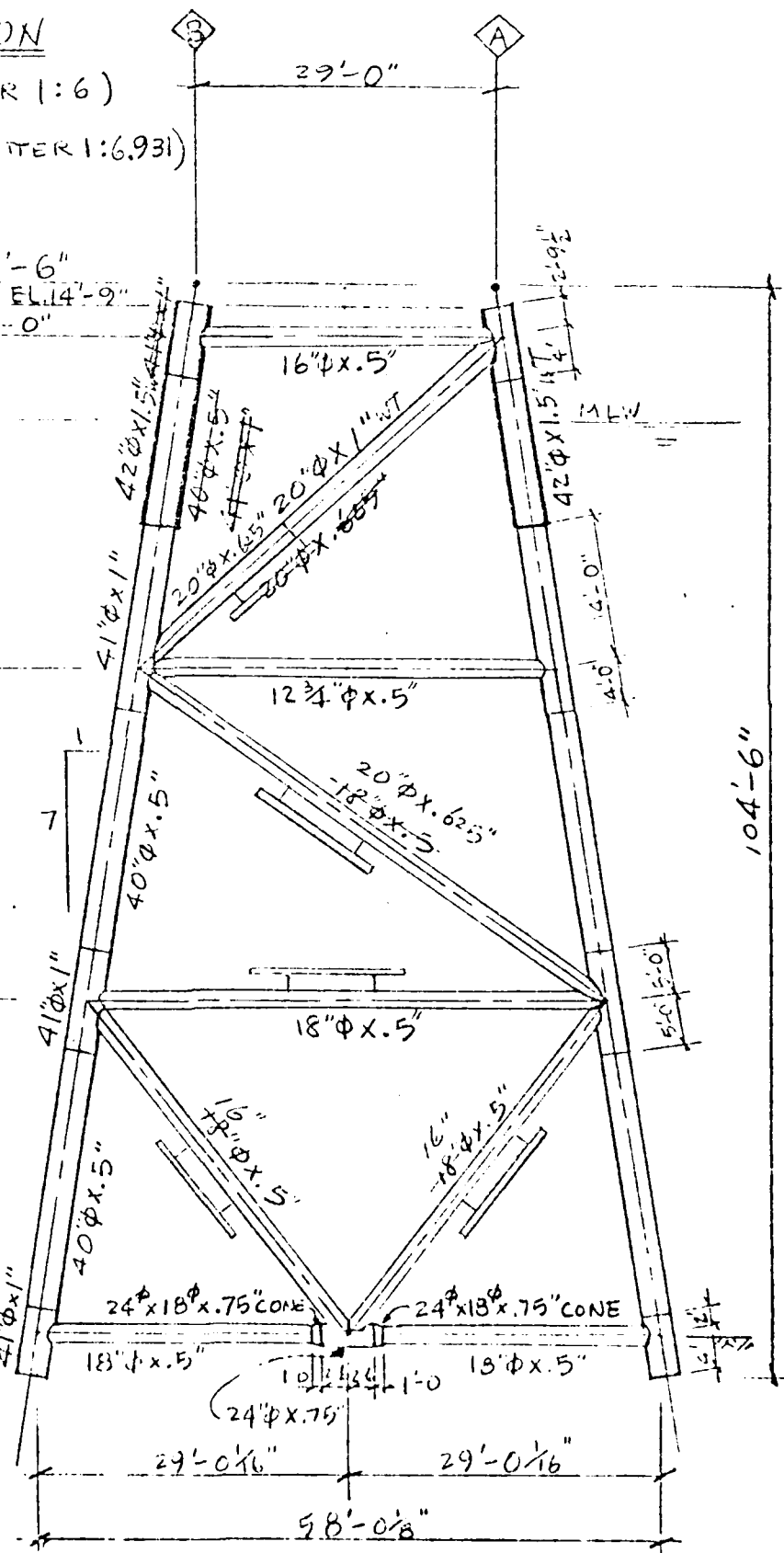
4 EL. (-) 20'-0"

↑ EL. (-) 52'-0"

Mud Line EL. (-) 34'-0"

BOY OF J.L.F. FL. (-) 23'-0"

SCALE $\frac{1}{8}" = 1' - 0"$



CREST OFFSHORE, INC.

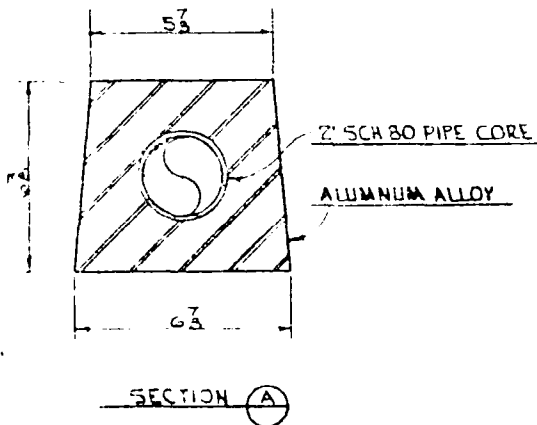
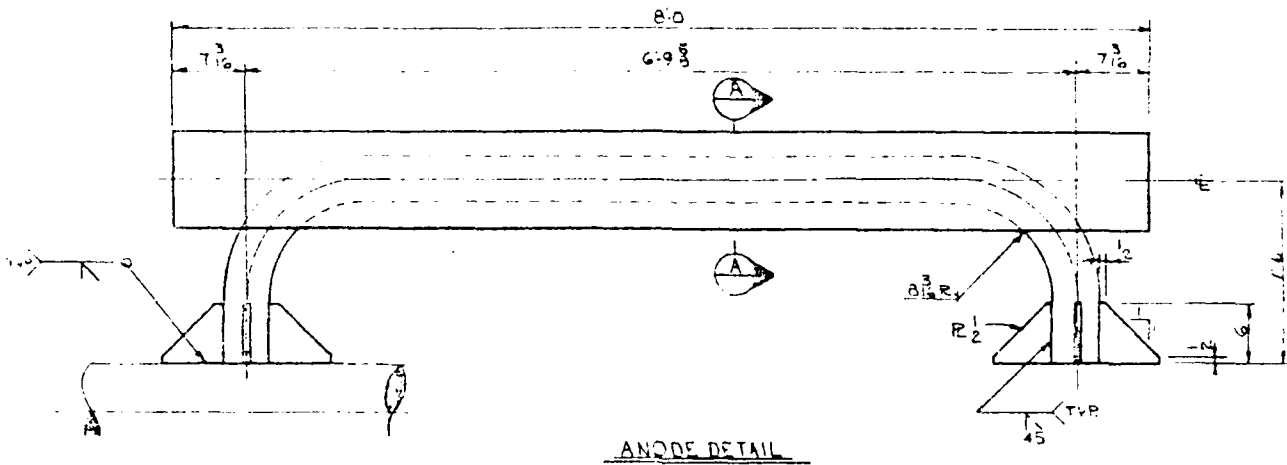
Sheet 11 of 12

By C. Chilton, Chief, M. J. HAY

Subject: Structural Corrosion Protection

Date: 5-4-76 Job No. 27-511-72

Calculation: Corrosion Protection



ANODE WEIGHT LBS EACH		
ALUMINUM	CORE	TOTAL
ANODE	ANODE	ANODE
325	43	368

NOTE:
THE CATHODIC PROTECTION SYSTEM USED ON THIS PLATFORM WAS DESIGNED IN ACCORDANCE WITH PROCEDURES DEFINED BY CATHODIC PROTECTION SERVICE OF HOUSTON, TEXAS. THE ANODES USED SHALL BE OF THE DOW GALVALUM TYPE AS SHOWN ON CATHODIC PROTECTION SERVICE DRAWING S-263.

CREST OFFSHORE, INC.

Sheet 112 of 125

By: C. J. [Signature] Client: W. S. D. [Signature] Subject: Structural Corrosion Protection
Date: 4-20-77 Job No. 87-171-1-1 Calculation: Corrosion Protection

11.6 ATMOSPHERIC ZONE

Check same regarding corrosion protection for legs

MEMBER SIZE	MEMBER LENGTH (Feet)	SURFACE AREA	No. REQUIRED	TOTAL AREA	NOTES
	FT	SQ. FT		SQ. FT	
4" x 4" WT	20'-0"	128.2	3	684.6	JKT LEG
10" x 8" WT	30'-0"	126.7	3	380.1	JKT BRACES EL. (+) 1'-0"
12" x 8" WT	10'-0"	50.1	3	150.3	"
36" x 12" WT	37'-0"	537.2	3	1,611.6	Sup. STR LEG
12" x 8" WT	28'-0"	96.6	3	290.4	BRACES EL. (+) 4'-0"
12" x 8" WT	32'-0"	103.0	3	327.0	"
3" x 3" WT	12'-6"	21.7	2	43.4	BRACES
1" x 1" WT	18'-0"	60.1	2	120.2	"
W18 x 60	20'-0"	150.5	3	478.5	Equip. Deck
W8 x 24	25'-0"	74.0	2	148.0	"
W8 x 24	20'-0"	59.2	10	592.0	"
1/4" PL	20' x 25'	500.0	2	1000.0	"

continue

CREST OFFSHORE, INC.

Sheet 11-13 of 13

By C. Chaz Client 11-13-13 Subject Structural Steel Deck Area
 Date 4-20-13 Job No. 27-171-7 Calculation Structural Steel Deck

MEMBER SIZE	MEMBER LENGTH (GROSS) FT	SURFACE AREA SQ. FT	NO. REDUCED	TOTAL AREA SQ. FT	NOTES
W15X50	36'-0"	170.6	4	682.4	Top Deck
W12X27	36'-0"	128.7	4	515.6	"
W12X25	36'-0"	96.3	4	385.2	"
4x3 1/2x5.2	5'-0"	3.83	57	218.3	"
2x2	35x35'	1,225.0	2	2450.0	"
2x6 3x4	20'-0"	87.0	2	174.0	"
			TOTAL	10,251.6	

10,251.6 SQ. FT

Stairway *

1,331.

Boat Landing *

743. SQ. FT

12,331 SQ. FT

* Values from Steel Deck Structures under separate contract
 Crest Offshore Job No. 27-621-00 to Cable Corporation

SECTION 12
WEIGHT TAKEOFF

12.1 INTRODUCTION

Set forth herein is the weight and material list of the major components of the proposed three-pile structure. Boat landing, stairway, safety nets and miscellaneous items are not included in this section.

by CREST OFFSHORE, INC. on 01/15/14 for Structural Concept Analysis
Date 01/15/14 Job No. 22-1771-12 Calculation Weight Tables

12.2 MATERIAL LISTING

(A. Summary)

The listing provides herein summary material requirements for the proposed three-pile sheet pile including boat landing, stanchions and miscellaneous items.

GREST OFFSHORE, INC.

Sheet 6 of 6

Project: Offshore Platform Subject: Material Listing
 Job No. 27-017-174 Calculation: Weight

(B) Material Listing -- Components

Summary

BILL OF MATERIALS SUMMARY

ACMR 3-PILE STRUCTURE MATERIAL LISTING -- PILING

U.S. NAVY--C. CHERN

NOMINAL DIMENSION	TOTAL LENGTH (FEET)	TOTAL WEIGHT (POUNDS)
PIPE		
36,000 O.D. X 1.750 WT	300.00	192221.61
36,000 O.D. X 1.500 WT	480.00	265542.75
36,000 O.D. X 1.250 WT	66.00	30647.25

TOTAL WEIGHT

488411.61 LBS

EXCESS PILING TO BE CUT OFF IN FIELD

$$22" \times 1.25 \quad 3 \times 1 \times 10' \times 464 \text{ #/ft} = 13,920 \text{ #}$$

$$36" \times 1.75 \quad 3 \times 2 \times 2' \times 640 \text{ #/ft} = 7,680 \text{ #}$$

$$36" \times 1.50 \quad 3 \times 3 \times 2' \times 553 \text{ #/ft} = 9,954 \text{ #}$$

$$\underline{31,554 \text{ #}}$$

SPACE JOINT

$$22" \times 1.25 \quad 3 \times 5 \times 8' \times 216 \text{ #/ft} = 25,920 \text{ #}$$

Total

488412

31,554

25,920

545,886 #

CREST OFFSHORE, INC.

Sheet 12 of 100

BY S. J. HAY CLIENT U.S. NAVY SUBJECT 3-PILE STRUCTURE
 DATE 8-4-76 JOB NO. 42-711-11 CALCULATION Weight Takeoff

3 Jacket

WEIGHT OF MATERIALS SUMMARY

ACAR 3-PILE STRUCTURE MATERIAL LISTING -- JACKET

U.S. NAVY--010494

TOTAL WEIGHT (LBS) TOTAL LENGTH (FEET)

PIPE

42,000	0.0	X	1,500	FT	63.56	21523.83
21,000	0.0	X	1,000	FT	102.70	43615.71
60,000	0.0	X	1,500	FT	136.50	30950.67
20,000	0.0	X	0,750	FT	21.00	3914.59
20,000	0.0	X	1,000	FT	41.40	8408.85
20,000	0.0	X	0,625	FT	105.80	25587.54
18,000	0.0	X	1,500	FT	209.28	27094.20
18,000	0.0	X	0,500	FT	33.40	27416.55
10,000	0.0	X	1,375	FT	160.14	8708.81
12,750	0.0	X	0,500	FT	164.07	10742.81
12,750	0.0	X	0,375	FT	59.31	2902.30

TOTAL WEIGHT

231130.04 LBS

CREST OFFSHORE, INC.

Sheet 12 of 16

Project: Offshore Platform

Subject: Deck Structure

Drawing No: 100-100-100

Calculation: Weight Take-off

Deck Structure

UNIT WEIGHTS (LBS/FT²)
 AISC 360-16 STEEL DECK MATERIAL LISTING -- SLOPESTEEL TYPE U.S. NAVY--C, CHEM
 THICKNESS (IN) WEIGHT (LBS/FT²)
 (F100) (F100)

3/16" THICK	1.250	171.00	7000.00
1/2" THICK	2.500	150.00	12000.00
5/8" THICK	3.750	130.00	11000.00
3/4" THICK	5.000	110.00	9000.00

18" X 15.00	227.00	3000.00
12" X 25.00	140.00	3000.00
8" X 25.00	250.00	6000.00
6" X 15.00	50.00	3000.00

12" X 25.00	152.00	3000.00
-------------	--------	---------

1/4" THICKNESS	4.18	170.00
5/16" THICKNESS	100.16	1050.00
3/8" THICKNESS	1725.00	1700.00

TOTAL WEIGHT 138007.13 LBS

APPENDIX A
COMPUTER PRINTOUTS

A.1 INTRODUCTION

The computer printouts compiled hereinafter were used, respectively, in the following items:

- (1) Pile Driving Resistance Curves;
- (2) Laterally Loaded Pile Capacity;
- (3) Wave and Wind Loads;
- (4) Space Frame Analysis; and
- (5) Member Weight Takeoff.

A-2 PILE DRIVING RESISTANCE CURVES

Pile Driving Resistance Curves

Pile Diameter	- 30 in.
Minimum Wall Thickness	- .75 in.
Penetration	- 180 ft.
Hammer	- Vulcan 040
Quake Factor, tip	- .025 in.

UNITED COMPUTING 67. APEX/SL. B.0.24

10:19.31. 04/15/76.

[illegible]

WAVE EQUATION PROGRAM CHECK-HOUSTON UCC.
MC CLELLAND REPORT DATA FOR CURIC PROJECT.
MARCH 30, 1976

PROB
1

30 INCH DIAM PILE-EAST COAST USA.
100 FT PENETRATION-VULCAN 040 HAMMER.
QTIPS.025, MINIMUM WALL THICKNESS=.75

RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED BLOW COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
HPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (RPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN) RESISTITION	COEF OF RESISTITION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TON)	UNIT WT. (PCF)	MODULUS (PST)
1	30.000	490.0	20000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 5

NUMBER OF SECTIONS ADDED
 LENGTH OF FREE STANDING PILE (FT) 140.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	30.	0	30
2	1	1.750	95.	30	125
3	1	1.250	40.	125	165
4	1	1.000	40.	165	205
5	1	.750	135.	205	340

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SIDE DAMPENING RESISTANCE = JSIDE .15
 POINT DAMPENING RESISTANCE = JPOINT .15
 SOIL SHAKE FOR SIDE = QSIDE .10
 SOIL SHAKE FOR POINT = QPOINT .03

TIP RESISTANCE
 PERCENTAGE

14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROJ

1 30 INCH DIAM PILE-EAST COAST USA.
180 FT PENETRATION-VULCAN 600 HAMMER.

QTIP=.025, MINIMUM WALL THICKNESS=.75

RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FY	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	27284469.
3	160.00	0.00	3841.78	112.90	1.00	27284469.
4	150.00	0.00	3841.78	112.90	1.00	27284469.
5	140.00	0.00	3841.78	112.90	1.00	27284469.
6	130.00	0.00	4564.28	155.31	1.00	43460350.
7	121.36	0.00	4564.28	155.31	1.00	43460350.
8	112.73	0.00	4564.28	155.31	1.00	43460350.
9	104.09	0.00	4564.28	155.31	1.00	43460350.
10	95.45	0.00	4564.28	155.31	1.00	43460350.
11	86.82	0.00	4564.28	155.31	1.00	43460350.
12	78.18	0.00	4564.28	155.31	1.00	43460350.
13	69.55	0.00	4564.28	155.31	1.00	43460350.
14	60.91	0.00	4564.28	155.31	1.00	43460350.
15	52.27	0.00	4564.28	155.31	1.00	43460350.
16	43.64	0.00	4564.28	155.31	1.00	43460350.
17	35.00	0.00	3841.78	112.90	1.00	27284469.
18	25.00	0.00	3841.78	112.90	1.00	27284469.
19	15.00	0.00	3841.78	112.90	1.00	27284469.
20	5.00	0.00	3841.78	112.90	1.00	27284469.
21	-5.00	0.00	3100.15	91.11	1.00	22017380.
22	-15.00	0.00	3100.15	91.11	1.00	22017380.
23	-25.00	0.00	3100.15	91.11	1.00	22017380.
24	-35.00	0.00	3100.15	91.11	1.00	22017380.
25	-45.00	0.00	1978.72	68.92	1.00	19739720.
26	-53.44	0.00	1978.72	68.92	1.00	19739720.
27	-61.88	0.00	1978.72	68.92	1.00	19739720.
28	-70.31	0.00	1978.72	68.92	1.00	19739720.
29	-78.75	0.00	1978.72	68.92	1.00	19739720.
30	-87.19	0.00	1978.72	68.92	1.00	19739720.
31	-95.63	0.00	1978.72	68.92	1.00	19739720.
32	-104.06	0.00	1978.72	68.92	1.00	19739720.
33	-112.50	0.00	1978.72	68.92	1.00	19739720.
34	-120.94	0.00	1978.72	68.92	1.00	19739720.
35	-129.38	0.00	1978.72	68.92	1.00	19739720.
36	-137.81	0.00	1978.72	68.92	1.00	19739720.
37	-146.25	0.00	1978.72	68.92	1.00	19739720.
38	-154.69	0.00	1978.72	68.92	1.00	19739720.
39	-163.13	0.00	1978.72	68.92	1.00	19739720.
40	-171.56	1000.00	1978.72	68.92	1.00	19739720.

1 30 INCH DIAM PILE - EAST COAST USA.
1800T PENETRATION - VULCAN 600 HAMMER.

QTYP = .025, MINIMUM WALL THICKNESS = .75 RU = 14

TABLE 2 -- MAXIMUM STRESS DATA

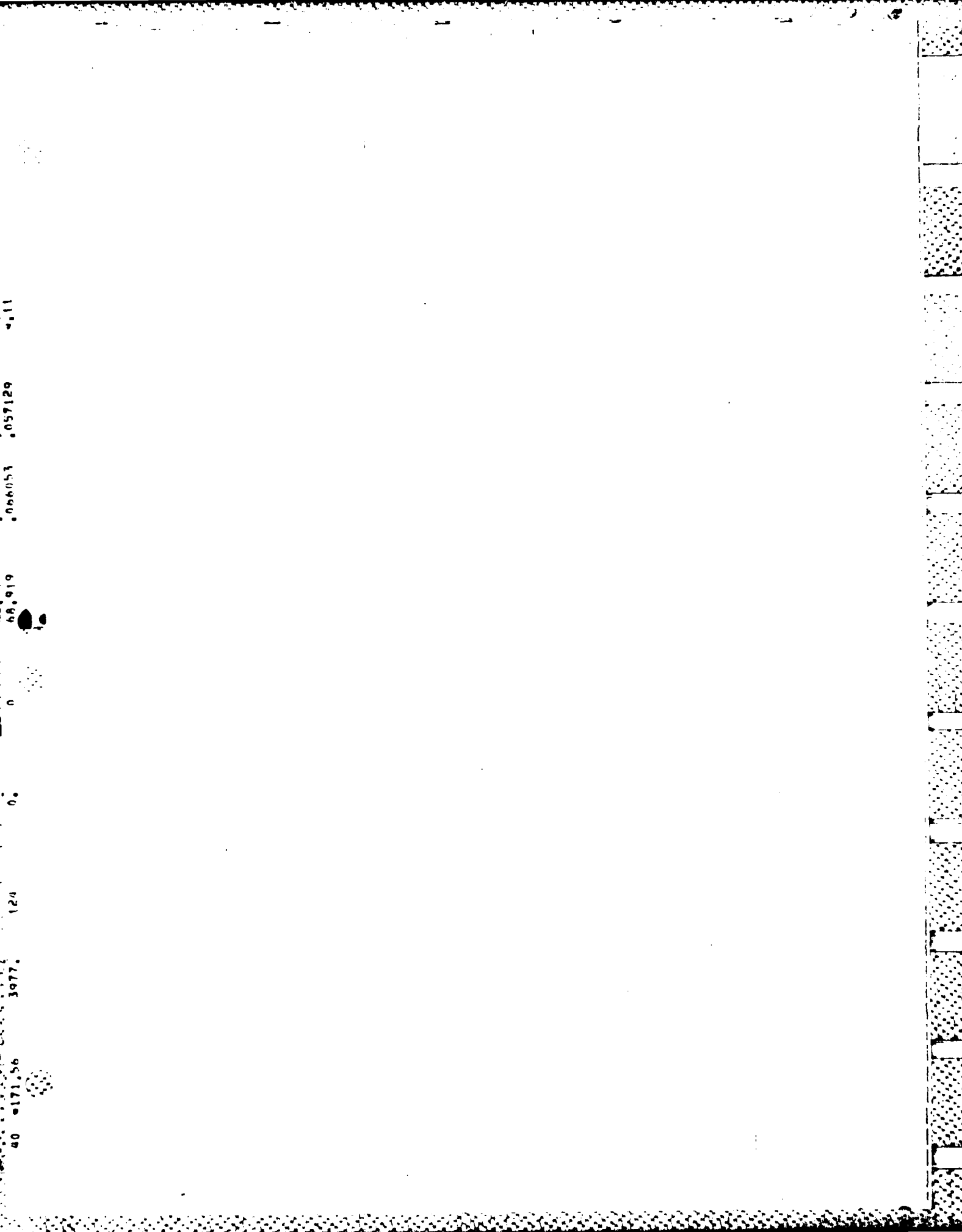
TYP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0011 INCHES

NUMBER OF BLOWS PER FOOT = 292.50

TOTAL INTERVALS = 192

SEC	ELEV FT	MAX C STRESS LBS/SQ. IN.	TIME N	MAX T STRESS LBS/SQ. IN.	TIME N	AREA SQ. IN.	D MAX (M) IN.	D (M) IN.	V (M) FT/SEC
1	0.00	1747701.	30	0.	158	1,000	1.413143	1.408242	-2.66
2	0.00	1528932.	42	0.	153	1,000	1.048332	.864676	-2.90
3	160.00	13899.	45	611.	87	112.901	1.075414	.844709	-2.65
4	150.00	14191.	47	1181.	90	112.901	1.071942	.827144	-2.49
5	140.00	14356.	49	1700.	92	112.901	1.065286	.813632	-2.26
6	130.00	10466.	51	1471.	94	155.313	1.055434	.799513	-1.84
7	121.36	10492.	53	1421.	95	155.313	1.047041	.790153	-1.59
8	112.73	10492.	55	1490.	97	155.313	1.036542	.779254	-1.17
9	104.09	10420.	56	1676.	99	155.313	1.024085	.767053	-0.95
10	95.45	10261.	58	1572.	100	155.313	1.010084	.756511	-1.19
11	86.82	10053.	60	1354.	102	155.313	.994704	.746731	-1.09
12	78.18	9827.	62	1014.	103	155.313	.978318	.733614	-0.57
13	69.55	9570.	64	804.	104	155.313	.961346	.719311	-0.66
14	60.91	9282.	66	125.	105	155.313	.944225	.707473	-0.93
15	52.27	8957.	68	0.	0	155.313	.929152	.694137	-0.20
16	43.64	8698.	71	0.	0	155.313	.922507	.675023	-0.98
17	35.00	11757.	74	0.	0	112.901	.917891	.653857	1.21
18	25.00	11523.	76	0.	0	112.901	.908078	.625961	-0.13
19	15.00	11270.	79	0.	0	112.901	.894908	.608956	-1.67
20	5.00	11212.	83	0.	0	112.901	.877626	.598529	-2.51
21	-5.00	14055.	85	0.	0	91.106	.855801	.589515	-2.75
22	-15.00	14284.	89	0.	0	91.106	.824020	.577108	-2.70
23	-25.00	14526.	92	0.	0	91.106	.787344	.561862	-2.52
24	-35.00	14854.	96	0.	0	91.106	.746063	.543012	-2.28
25	-45.00	19642.	98	0.	0	68.919	.700624	.519998	-2.02
26	-53.44	19475.	101	0.	0	68.919	.648425	.491031	-1.77
27	-61.88	19157.	103	0.	0	68.919	.595229	.459169	-1.55
28	-70.31	18672.	105	0.	0	68.919	.541616	.424704	-1.33
29	-78.75	18047.	108	0.	0	68.919	.488040	.384228	-1.13
30	-87.19	17259.	111	0.	0	68.919	.434532	.350189	-0.90
31	-95.63	16372.	114	0.	0	68.919	.381824	.311466	-0.79
32	-104.06	15521.	117	0.	0	68.919	.330350	.272728	-0.66
33	-112.50	14554.	118	0.	0	68.919	.281906	.234767	-0.50
34	-120.94	13273.	121	0.	0	68.919	.237115	.194430	-0.46
35	-129.38	11497.	123	0.	0	68.919	.195763	.144530	-0.39
36	-137.81	10164.	124	0.	0	68.919	.159137	.113826	-0.32
37	-146.25	8378.	124	0.	0	68.919	.127922	.107161	-0.27
38	-154.69	6516.	122	0.	0	68.919	.101956	.085266	-0.22



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PRIN

1 30 INCH DIAM PILE-EAST COAST USA.
180 FT PENETRATION-VULCAN 640 HAMMER.

QTTP=.025, MINIMUM WALL THICKNESS=.75 RU = 14

TABLE 9 -- RESISTANCE-HLW CURVE DATA

11P RESISTANCE PERCENTAGE = 14.00

BLWS/FT.	RESISTANCE DYNAMIC PT	MAX C STRESS	SEG	MAX T STRESS	SEG	
	TOTAL-TONS FORCE-TONS	LBS/SQ. IN. NO.	LBS/SQ. IN. NO.			
2.58	50	23.10	1555.	27	11674.	30
4.35	100	42.66	1576.	25	8709.	30
6.45	150	58.66	1683.	25	6089.	31
9.65	200	71.93	17064.	25	3915.	11
12.96	250	82.94	17289.	25	2895.	12
16.24	300	92.08	17512.	25	1921.	12
19.42	350	99.65	17728.	25	1760.	9
23.40	400	105.93	17935.	25	1751.	9
28.51	450	111.15	18146.	25	1743.	9
35.24	500	115.25	18351.	25	1734.	9
44.34	550	118.33	18550.	25	1726.	9
57.11	600	120.64	18743.	25	1718.	9
75.69	650	121.96	18927.	25	1709.	9
103.84	700	123.93	19116.	25	1701.	9
146.99	750	128.93	19299.	25	1701.	5
205.74	800	133.31	19474.	25	1701.	5
292.30	850	137.06	19642.	25	1700.	5
441.84	900	140.57	19804.	25	1700.	5

PR18

1 30 INCH DIAM PILE - EAST COAST USA.
180 FT PENETRATION - VULCAN 600 HAMMER.

QTIP = .02% MINIMUM WALL THICKNESS = .75 RU = 14

TABLE 10 - SPECIFIED ALLOW DATA

TIP RESISTANCE PERCENTAGE = 14.00

ALLOW PFR FOOT	RESISTANCE TONS
142.99	750.
205.74	800.
244.73	820.
292.30	850.

JYJ2JRF. 04/15/76. *UNITED COMPUTING* 67. APFX/SI. R.0.24

10.17.12SPIL.CM100.T100.			
10.17.12SFL	64	0.000	
10.17.12SAC340NCAR0023.2777100CC 1H			
10.17.12. 04/15/76. JYJ2JRF			
10.17.12.4FL.40000.			
10.17.12SFL	3492	0.000	
10.17.12SFL	16384	0.001	
10.17.12. MAP. IFF.			
10.17.13SFL	256	0.001	
10.17.13. GET. PILR (CAR0024)			
10.17.21. READY - PILR			
10.17.21SFL	4096	0.001	0
10.17.21SFL	72	1	
10.17.21. PILR.			
10.17.21SFL00	16384	0.001	
10.17.24SFL01	16384	0.136	190
10.17.24. FL REQUIRED TO LOAD			36370R (1560R)
10.17.24. FL REQUIRED TO EXECUTE			34000R (14336)
10.17.24SFL	16384	0.140	
10.17.3A. END PILORI			
10.17.38. COST.			
10.17.38SFL	14336	8.779	30
10.17.39.			26.4
10.17.39.			6.60
10.17.39SFL	12288	8.749	7
10.17.40. EXIT.			
10.17.40SJT00	2368	8.749	
10.17.40.			
10.17.40. *P.F. PRUS*P.F. ACC *TAPE PRUS* TAPE ACC			

Pile Driving Resistance Curves

Pile Diameter

- 36 in.

Minimum Wall Thickness

- .75 in.

- 1.25 in.

Penetration

- 200 ft.

Hammer

- Vulcan 040

Quake Factor, tip

- .025 in.

- .10 in.

- .30 in.

09.20.35. 04/20/76.

HAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PILE PILES
 MC CLELLAND REPORT DATA FOR ACR 3-PILE STRUCTURE -- HRRING 1
 APRIL 19 1976

PROB 1
 36-IN. DIAMETER PILES 3-PILE STRUCTURE
 200FT PENETRATION -- VULCAN 040 HAMMER
 QTYPE, 025, MINIMUM WALL THICKNESS, 75 IN, RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE 1
 NEW HAMMER DATA OPTION 1
 NEW MATERIAL DATA OPTION 1
 NEW PILE SECTION DATA OPTION 1
 NEW SOIL DATA OPTION 1
 SPECIFIED RLOW COUNT OPTION 1
 OUTPUT OPTION FOR STRESS 1
 RPF FOR STRESS OUTPUT OPTION 275.
 ULTIMATE RESISTANCE INCREMENT (TONS) 50.0
 MAX RLOWS FOR RESISTANCE-RLOW CURVE (RPF) 300.
 SPECIFIED SEGMENT LENGTH (FT) 0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION VULCAN 040 HAMMER
 HAMMER EFFICIENCY .75
 HAMMER ENERGY (FT-LBS) 120000.00
 HAMMER EXPLOSIVE FORCE (LRS) 0.00
 NUMBER OF HAMMER SEGMENTS 2

SEGMENT NUMBER	SLACK (IN)	WFIGHT (LH)	AREA (SQ IN)	COFF OF RESTITUTION	SPRING CONSTANT (LR / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TUN)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 4
 NUMBER OF SECTIONS CHANGED 0

TOTAL NUMBER OF PILE SECTIONS 4
 NUMBER OF SECTIONS CHANGED 0
 NUMBER OF SECTIONS ADDED 0
 LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP BOTTOM
1	1	1.250	90.	0 90
2	1	1.500	100.	90 190
3	1	1.250	50.	190 240
4	1	.750	40.	240 320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 STIFF DAMPING RESISTANCE - JSTDF .15
 POINT DAMPING RESISTANCE - JPOINT .15
 SOIL QUAKE FOR STIFF - JSTDF .10
 SOIL QUAKE FOR POINT - JPOINT .03

TIP RESISTANCE
 PERCENTAGE

14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

OTIPS.025, MINIMUM WALL THICKNESS.75 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	3869.62	136.46	1.00	39574342.
26	-78.33	0.00	3869.62	136.46	1.00	39574342.
27	-86.67	0.00	3869.62	136.46	1.00	39574342.
28	-95.00	0.00	3869.62	136.46	1.00	39574342.
29	-103.33	0.00	3869.62	136.46	1.00	39574342.
30	-111.67	0.00	3869.62	136.46	1.00	39574342.
31	-120.00	0.00	2512.19	83.06	1.00	22580864.
32	-128.89	0.00	2512.19	83.06	1.00	22580864.
33	-137.78	0.00	2512.19	83.06	1.00	22580864.
34	-146.67	0.00	2512.19	83.06	1.00	22580864.
35	-155.56	0.00	2512.19	83.06	1.00	22580864.
36	-164.44	0.00	2512.19	83.06	1.00	22580864.
37	-173.33	0.00	2512.19	83.06	1.00	22580864.
38	-182.22	0.00	2512.19	83.06	1.00	22580864.
39	-191.11	1000.00	2512.19	83.06	1.00	22580864.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025, MINIMUM WALL THICKNESS=.75 IN. RU = 14

TABLE A -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0314 INCHES

NUMBER OF HITS PER FOOT = 377.08

TOTAL INTERVALS = 155

SEG	ELEV FT	MAX C STRESS LHS/SQ. IN.	TIME N	MAX T STRESS LHS/SQ. IN.	TIME N	AREA SQ. IN.	DHAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1781801.	36	0.	86	1.000	1.195696	1.179398	-.72
2	0.00	1481608.	48	0.	0	1.000	.783900	.733771	-.49
3	120.00	10889.	50	0.	0	136.463	.770099	.716667	-.40
4	111.00	10927.	53	0.	0	136.463	.761915	.705719	-.52
5	102.00	11075.	56	0.	0	136.463	.753255	.693367	-.59
6	93.00	11162.	59	0.	0	136.463	.744311	.682629	-.68
7	84.00	11343.	62	0.	0	136.463	.735145	.670450	-.83
8	75.00	11533.	65	0.	0	136.463	.725968	.657722	-1.00
9	66.00	11715.	67	0.	0	136.463	.716689	.644401	-1.17
10	57.00	11879.	70	0.	0	136.463	.706968	.630581	-1.34
11	48.00	12016.	72	0.	0	136.463	.696425	.616248	-1.48
12	39.00	12135.	75	0.	0	136.463	.684855	.601551	-1.58
13	30.00	10268.	78	0.	0	162.578	.672102	.586582	-1.67
14	21.67	10391.	80	0.	0	162.578	.661195	.574680	-1.75
15	13.33	10540.	83	0.	0	162.578	.649429	.562380	-1.83
16	5.00	10698.	85	0.	0	162.578	.636833	.549547	-1.89
17	-3.33	10847.	88	0.	0	162.578	.623334	.536290	-1.97
18	-11.67	10844.	90	0.	0	162.578	.608663	.522622	-2.03
19	-20.00	10864.	93	0.	0	162.578	.592642	.508247	-2.07
20	-28.33	10845.	96	0.	0	162.578	.575210	.493099	-2.11
21	-36.67	10749.	98	0.	0	162.578	.556467	.477238	-2.16
22	-45.00	10550.	101	0.	0	162.578	.536834	.460492	-2.16
23	-53.33	10258.	103	0.	0	162.578	.516758	.442860	-2.16
24	-61.67	9994.	107	0.	0	162.578	.496101	.424660	-2.14
25	-70.00	11629.	110	0.	0	136.463	.474837	.405811	-2.04
26	-78.33	11315.	113	0.	0	136.463	.443651	.360151	-1.95
27	-86.67	10807.	114	0.	0	136.463	.397447	.337332	-1.87
28	-95.00	10195.	118	0.	0	136.463	.370251	.314778	-1.79
29	-103.33	9596.	122	0.	0	136.463	.342421	.292453	-1.69
30	-111.67	9137.	124	0.	0	136.463	.313907	.270606	-1.59
31	-120.00	14165.	129	0.	0	136.463	.266434	.233646	-1.43
32	-128.33	13777.	132	0.	0	136.463	.222906	.190925	-1.26
33	-137.78	12117.	133	0.	0	136.463	.183082	.167047	-1.09
34	-146.67	10631.	135	0.	0	136.463	.147975	.131175	-.93
35	-155.56	9125.	139	0.	0	136.463	.117698	.112485	-.72
36	-164.44	7426.	141	0.	0	136.463	.092349	.080000	-.53
37	-173.33	6227.	149	0.	0	136.463			

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PROB

1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 000 HAMMER

QTIP=.025, MINIMUM WALL THICKNESS=.75 IN. RU = 14

TABLE 9 -- RESISTANCE-R/L/W CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE DYNAMIC PT	MAX C STRESS	SEG	MAX T STRESS	SEG
TOTAL-TONS	FORCE-TONS	LRS/SQ.IN. NO.	LRS/SQ.IN. NO.	LRS/SQ.IN. NO.	
2.65	50	21.49	31	13374.	31
4.09	100	41.15	31	13888.	31
6.47	150	57.92	31	14047.	31
8.84	200	72.55	31	14137.	31
11.86	250	85.35	31	14205.	31
14.30	300	96.54	31	14247.	31
16.20	350	106.55	31	14325.	31
18.42	400	114.91	31	14373.	31
21.07	450	122.42	31	14422.	31
24.27	500	128.99	31	14460.	31
28.16	550	134.72	31	14495.	31
32.98	600	139.57	31	14524.	31
39.06	650	143.65	31	14545.	31
46.47	700	146.96	31	14557.	31
57.12	750	149.73	31	14559.	31
70.93	800	151.77	31	14564.	31
90.24	850	152.82	31	14576.	31
117.64	900	156.45	31	14667.	31
156.08	950	161.66	31	14603.	31
205.31	1000	166.27	31	14531.	31
273.06	1050	170.01	31	14253.	31
377.04	1100	173.46	31	14165.	31

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN ODD HAMMER

QTIPS, 0.25, MINIMUM WALL THICKNESS, 75 IN. RU = 14

TABLE 10 -- SPECIFIED BLIND DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS PER FOOT	RESISTANCE TONS
156.08	950.
205.31	1000.
273.06	1050.
295.60	1063.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACHR 3-PILE STRUCTURE -- HOHNG 1
 APRIL 19 1976

PROB
 2

36-IN. DIAMETER PILES 3-PILE STRUCTURE
 200FT PENETRATION -- VULCAN 040 HAMMER
 OTTPS, 10, MINIMUM WALL THICKNESS=.75 IN. 311 = 35

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED ALLOW COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
RPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (RPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	=0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	=0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LR / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TUN)	UNIT WT. (PCF)	MODULUS (PST)
1	36.000	490.0	290000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 4
 NUMBER OF SECTIONS CHANGED 0
 NUMBER OF SECTIONS ADDED 0
 LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP BOTTOM
1	1	1.250	90.	0 90
2	1	1.500	100.	90 190
3	1	1.250	50.	190 240
4	1	.750	80.	240 320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SIDE DAMPING RESISTANCE - JSIDE .15
 POINT DAMPING RESISTANCE - JPOINT .15
 SOIL QUAKE FOR SIDE - OSIDE .10
 SOIL QUAKE FOR POINT - OPOINT .10

TIP RESISTANCE
 PERCENTAGE

15.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 2 34-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN OGO HAMMER

QTIPs, 10-MINIMUM WALL THICKNESS=.75 IN. MU = 35

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	COEF RSTITU	SPR STIFF LRS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2700000.
2	0.00	1000.00	27000.00	1.00	.90	3600000.
3	120.00	0.00	4179.19	136.46	1.00	3600000.
4	111.00	0.00	4179.19	136.46	1.00	3600000.
5	102.00	0.00	4179.19	136.46	1.00	3600000.
6	93.00	0.00	4179.19	136.46	1.00	3600000.
7	84.00	0.00	4179.19	136.46	1.00	3600000.
8	75.00	0.00	4179.19	136.46	1.00	3600000.
9	66.00	0.00	4179.19	136.46	1.00	3600000.
10	57.00	0.00	4179.19	136.46	1.00	3600000.
11	48.00	0.00	4179.19	136.46	1.00	3600000.
12	39.00	0.00	4179.19	136.46	1.00	3600000.
13	30.00	0.00	4610.13	162.54	1.00	47147562.
14	21.67	0.00	4610.13	162.54	1.00	47147562.
15	13.33	0.00	4610.13	162.54	1.00	47147562.
16	5.00	0.00	4610.13	162.54	1.00	47147562.
17	-3.33	0.00	4610.13	162.54	1.00	47147562.
18	-11.67	0.00	4610.13	162.54	1.00	47147562.
19	-20.00	0.00	4610.13	162.54	1.00	47147562.
20	-24.53	0.00	4610.13	162.54	1.00	47147562.
21	-34.67	0.00	4610.13	162.54	1.00	47147562.
22	-45.00	0.00	4610.13	162.54	1.00	47147562.
23	-53.33	0.00	4610.13	162.54	1.00	47147562.
24	-61.67	0.00	4610.13	162.54	1.00	47147562.
25	-70.00	0.00	3869.62	136.46	1.00	39574342.
26	-78.33	0.00	3869.62	136.46	1.00	39574342.
27	-86.67	0.00	3869.62	136.46	1.00	39574342.
28	-95.00	0.00	3869.62	136.46	1.00	39574342.
29	-103.33	0.00	3869.62	136.46	1.00	39574342.
30	-111.67	0.00	3869.62	136.46	1.00	39574342.
31	-120.00	0.00	2512.19	83.06	1.00	22500000.
32	-128.00	0.00	2512.19	83.06	1.00	22500000.
33	-137.78	0.00	2512.19	83.06	1.00	22500000.
34	-146.67	0.00	2512.19	83.06	1.00	22500000.
35	-155.56	0.00	2512.19	83.06	1.00	22500000.
36	-164.44	0.00	2512.19	83.06	1.00	22500000.
37	-173.33	0.00	2512.19	83.06	1.00	22500000.
38	-182.22	0.00	2512.19	83.06	1.00	22500000.
39	-191.11	1000.00	2512.19	83.06	1.00	22500000.

PROB 2 34-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN OGD HAMMER

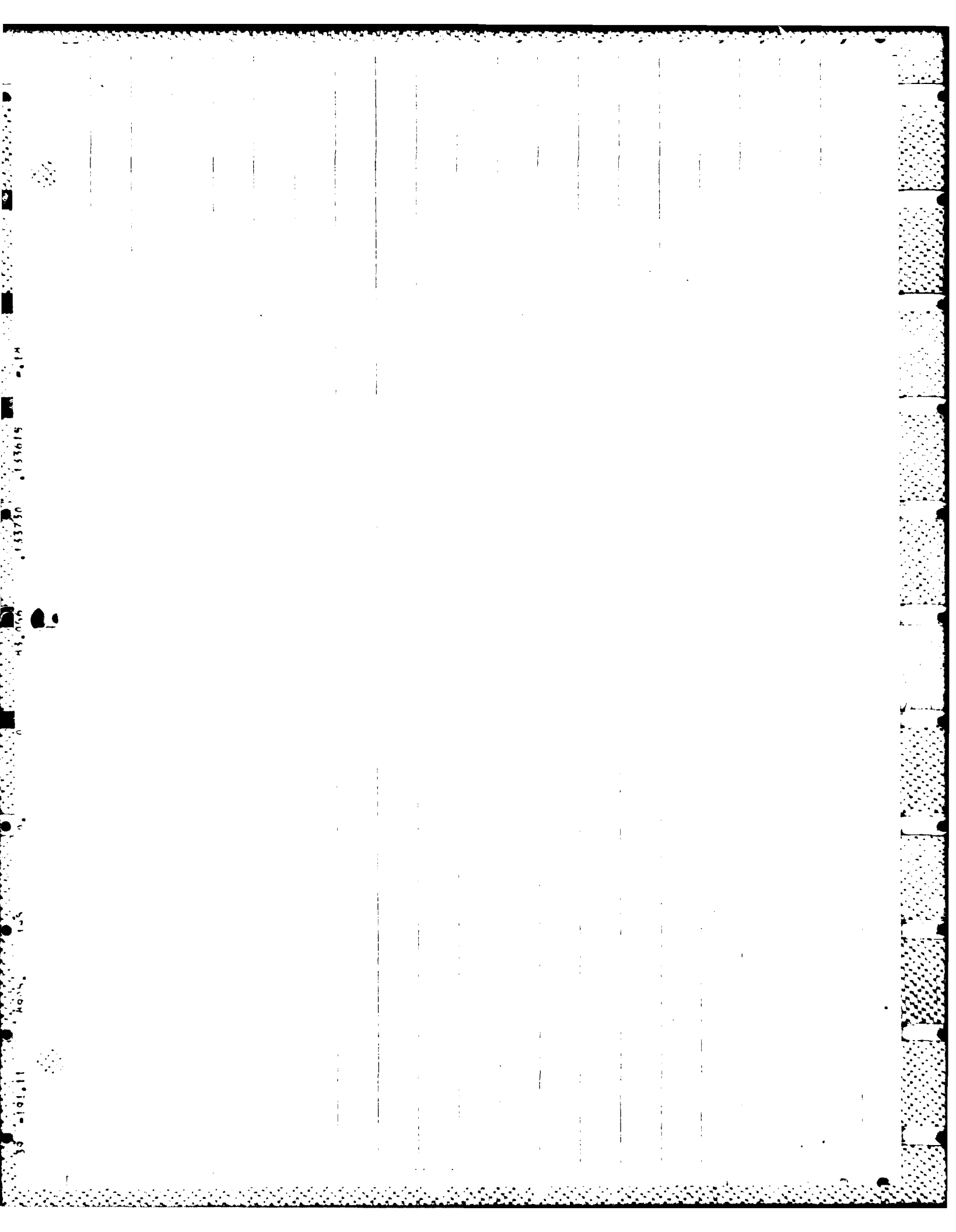
OTIP=10, MINIMUM WALL THICKNESS=.75 IN. MU = 35

TABLE A -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 35.00

PERMANENT SET OF PILE = .0337 INCHES
NUMBER OF BLOWS PER FOOT = 355.77
TOTAL INTERVAL, S = 159

SEC	ELEV FT	MAX C STRESS LBS/SQ. IN.	TIME N	MAX T STRESS LBS/SQ. IN.	TIME N	AREA SQ. IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1781801.	34	0.	0	1.000	1.213118	1.195109	-0.59
2	0.00	1481808.	40	0.	0	1.000	.800812	.772794	-0.08
3	120.00	10889.	50	0.	0	136.463	.787056	.759958	-0.03
4	111.00	10927.	53	0.	0	136.463	.770014	.753663	.01
5	102.00	11005.	56	0.	0	136.463	.770689	.746867	.02
6	93.00	11162.	59	0.	0	136.463	.762406	.739543	-0.03
7	84.00	11343.	62	0.	0	136.463	.754406	.731682	-0.11
8	75.00	11533.	65	0.	0	136.463	.747345	.721369	-0.22
9	66.00	11714.	67	0.	0	136.463	.740711	.714759	-0.32
10	57.00	11897.	70	0.	0	136.463	.733959	.705953	-0.43
11	48.00	12010.	72	0.	0	136.463	.726853	.697092	-0.54
12	39.00	12114.	75	0.	0	136.463	.719362	.688063	-0.66
13	30.00	10232.	77	0.	0	162.578	.711787	.678687	-0.80
14	21.67	10318.	80	0.	0	162.578	.705937	.670957	-0.90
15	13.33	10415.	82	0.	0	162.578	.699813	.662794	-0.99
16	5.00	10516.	85	0.	0	162.578	.692933	.654224	-1.09
17	-3.33	10567.	87	0.	0	162.578	.685073	.645069	-1.20
18	-11.67	10557.	90	0.	0	162.578	.676191	.635221	-1.31
19	-20.00	10527.	92	0.	0	162.578	.666427	.624660	-1.43
20	-28.33	10478.	95	0.	0	162.578	.656044	.613178	-1.56
21	-36.67	10383.	97	0.	0	162.578	.644898	.600646	-1.69
22	-45.00	10209.	100	0.	0	162.578	.632862	.587026	-1.83
23	-53.33	9941.	102	0.	0	162.578	.620044	.572284	-1.94
24	-61.67	9636.	105	0.	0	162.578	.606305	.556530	-2.01
25	-70.00	11187.	108	0.	0	136.463	.591552	.539987	-2.04
26	-78.33	10902.	111	0.	0	136.463	.573055	.519741	-2.04
27	-86.67	10490.	113	0.	0	136.463	.553398	.499115	-2.01
28	-95.00	10030.	116	0.	0	136.463	.532331	.478149	-1.96
29	-103.33	9635.	120	0.	0	136.463	.509549	.456922	-1.94
30	-111.67	9324.	124	0.	0	136.463	.484946	.435283	-1.91
31	-120.00	14659.	127	0.	0	83.056	.458440	.413292	-1.88
32	-128.33	14254.	132	0.	0	83.056	.412506	.370397	-1.82
33	-137.78	13909.	135	0.	0	83.056	.367685	.335564	-1.84
34	-146.67	13579.	138	0.	0	83.056	.323984	.297846	-1.85
35	-155.56	12552.	143	0.	0	83.056	.281191	.261838	-1.80
36	-164.44	11790.	145	0.	0	83.056	.238792	.227577	-1.79
37	-173.33	11267.	148	0.	0	83.056	.190338	.190554	-1.73
38	-182.22	10331.	149	0.	0	83.056	.140649	.145309	-1.65
39	-191.11	8905.	149	0.	0	83.056	.133730	.133615	-1.64



PROB 2 30-IN. DIAMETER PILES 3-PIE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

OTIP, 10, MINIMUM WALL THICKNESS, 75 IN. RU = 35

TABLE 9 -- RESISTANCE-HIGH CURVE DATA

TIP RESISTANCE PERCENTAGE = 55.00					
BLOWS/FT.	RESISTANCE DYNAMIC PT	MAX C STRESS	SEG	MAX T STRESS	SEG
	TOTAL TONS FORCE-TONS	LBS/SQ. IN. MIN.	LBS/SQ. IN. NO.		
2.56	500	15087	31	12072	31
4.08	1000	14100	31	4414	31
6.70	1500	14188	31	4973	31
9.42	2000	14252	31	4428	31
13.29	2500	14300	31	2902	31
15.93	3000	14308	31	1338	6
18.41	3500	14397	31	387	12
21.43	4000	14435	31	146	12
25.14	4500	14473	31	48	3
29.84	5000	14500	31	0	39
35.49	5500	14537	31	0	39
43.49	6000	14588	31	0	39
54.77	6500	14591	31	0	39
70.19	7000	14615	31	0	39
93.31	7500	14631	31	0	39
130.74	8000	14646	31	0	39
199.58	8500	14653	31	0	39
355.77	9000	14659	31	0	39

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
 200FT PENETRATION -- VULCAN OIL MANUFACT

OTTPS, 10, MINIMUM WALL THICKNESS = .75 IN. RU = 35

TABLE 10 -- SPECIFIED RULOW DATA

TIP RESISTANCE PERCENTAGE = 35.00

RULOWS PER FOOT	RESISTANCE TONS
130.74	800.
199.58	850.
235.38	866.
242.16	882.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAN REPORT DATA FOR ACHM 3-PILE STRUCTURE -- HITTING 1
 APRIL 19 1974

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 3
 36-IN. DIAMETER PILES 3-PILE STRUCTURE
 200FT PENETRATION -- VULCAN 040 HAMMER
 OTYPE=30, MINIMUM WALL THICKNESS=.75 IN. RD = 50

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED MINIMUM COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
RPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX PLUMS FOR RESISTANCE-PLUM CURVE (RPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	=0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	=0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LR / IN)
1	1000.00	40000.00	1.00	.00	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	STIFF (TON)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 11

NUMBER OF SECTIONS ADDED 0
 TOTAL OF FREE STANDING DEFEATS 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP BOTTOM
1	1	1.250	90.	0 90
2	1	1.500	100.	90 190
3	1	1.250	50.	190 240
4	1	.750	80.	240 320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SIDE DAMPING RESISTANCE = JSIDE .15
 POINT DAMPING RESISTANCE = JPOINT .15
 SOIL QUAKE FOR SIDE = QSIDE .10
 SOIL QUAKE FOR POINT = QPOINT .30

TIP RESISTANCE
 PERCENTAGE

50.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

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3 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN OGD HAMMER

QTIP, 30, MINIMUM WALL THICKNESS, 75 IN. WU = 50

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	FLYV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	COEF RSTTU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.60	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	162.00	0.00	4179.19	136.46	1.00	36642910.
6	95.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	3869.62	136.46	1.00	39574342.
26	-78.33	0.00	3869.62	136.46	1.00	39574342.
27	-86.67	0.00	3869.62	136.46	1.00	39574342.
28	-95.00	0.00	3869.62	136.46	1.00	39574342.
29	-103.33	0.00	3869.62	136.46	1.00	39574342.
30	-111.67	0.00	3869.62	136.46	1.00	39574342.
31	-120.00	0.00	2512.19	83.06	1.00	22580864.
32	-128.89	0.00	2512.19	83.06	1.00	22580864.
33	-137.78	0.00	2512.19	83.06	1.00	22580864.
34	-146.67	0.00	2512.19	83.06	1.00	22580864.
35	-155.56	0.00	2512.19	83.06	1.00	22580864.
36	-164.44	0.00	2512.19	83.06	1.00	22580864.
37	-173.33	0.00	2512.19	83.06	1.00	22580864.
38	-182.22	0.00	2512.19	83.06	1.00	22580864.
39	-191.11	1000.00	2512.19	83.06	1.00	22580864.

PROB 5 34-IN. DIAMETER PILLS 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN OUN HAMMER

QTYPE 30, MINIMUM WALL THICKNESS .75 IN. RU = 50

TABLE A -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 50.00

PERMANENT SET OF PILE = .0203 INCHES
NUMBER OF HITS PER FOOT = 590.68
TOTAL INTERVALS = 162

SEC	FLEV FT	MAX C STRESS LBS/SQ. IN.	TIME N	MAX T STRESS LBS/SQ. IN.	TIME N	AREA SQ. IN.	DMAX (M) IN.	D (M) IN.	V (M) FT/SEC
1	0.00	1711101.	34	0.	162	1.000	1.240636	1.223526	12.04
2	0.00	1411108.	40	0.	0	1.000	.828015	.818145	.22
3	120.00	10409.	50	0.	0	136.463	.814294	.808768	.30
4	111.00	10927.	53	0.	0	136.463	.806497	.806497	.38
5	102.00	11005.	56	0.	0	136.463	.803675	.803675	.42
6	93.00	11162.	59	0.	0	136.463	.800235	.800235	.45
7	84.00	11343.	62	0.	0	136.463	.796287	.796287	.44
8	75.00	11532.	65	0.	0	136.463	.791986	.791986	.42
9	66.00	11714.	67	0.	0	136.463	.787506	.787506	.37
10	57.00	11876.	70	0.	0	136.463	.782954	.782954	.29
11	48.00	12006.	72	0.	0	136.463	.778297	.778297	.18
12	39.00	12102.	75	0.	0	136.463	.773462	.773462	.05
13	30.00	12211.	77	0.	0	162.578	.768821	.768821	.07
14	21.67	12374.	80	0.	0	162.578	.764087	.764150	.16
15	13.33	12546.	82	0.	0	162.578	.759657	.759657	.25
16	5.00	12704.	85	0.	0	162.578	.755664	.754753	.35
17	-3.33	12874.	87	0.	0	162.578	.75123	.749418	.44
18	-11.67	13046.	89	0.	0	162.578	.746594	.745594	.54
19	-20.00	13233.	92	0.	0	162.578	.742003	.737194	.66
20	-28.33	13459.	94	0.	0	162.578	.737068	.730086	.80
21	-36.67	13684.	97	0.	0	162.578	.732023	.722031	.96
22	-45.00	13900.	99	0.	0	162.578	.72704	.71847	1.12
23	-53.33	14127.	101	0.	0	162.578	.72204	.702549	1.26
24	-61.67	14354.	104	0.	0	162.578	.717197	.691288	1.34
25	-70.00	14581.	107	0.	0	136.463	.704650	.679288	1.37
26	-78.33	14808.	109	0.	0	136.463	.692120	.664531	1.38
27	-86.67	15035.	111	0.	0	136.463	.679594	.649473	1.38
28	-95.00	15262.	115	0.	0	136.463	.667174	.633997	1.40
29	-103.33	15489.	118	0.	0	136.463	.654754	.617845	1.44
30	-111.67	15716.	122	0.	0	136.463	.642334	.600854	1.50
31	-120.00	15943.	124	0.	0	136.463	.629914	.582926	1.51
32	-128.89	16170.	128	0.	0	136.463	.617494	.550985	1.51
33	-137.78	16397.	132	0.	0	136.463	.605074	.518649	1.54
34	-146.67	16624.	134	0.	0	136.463	.592654	.485735	1.44
35	-155.56	16851.	135	0.	0	136.463	.580234	.452822	1.31
36	-164.44	17078.	139	0.	0	136.463	.567814	.419190	1.11
37	-173.33	17305.	143	0.	0	136.463	.555394	.386115	.83
38	-182.22	17532.	147	0.	0	136.463	.542974	.353249	.52

PROR 3 34-IN. DIAMETER PILES T-PILE STRUCTURE
200FT PENETRATION -- VULCAN 000 HAMMER

QTTYPE, 30, MINIMUM WALL THICKNESS = .75 IN. RU = 50

TABLE 9 -- RESISTANCE-HLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 50.00					
BLOWS/FT.	RESISTANCE DYNAMIC PT TOTAL-TONS FORCE-TONS	MAX C STRESS LBS/SQ. IN. MO.	SFG LBS/SQ. IN. MO.	MAX T STRESS LBS/SQ. IN. MO.	SEG
2.49	50	13574.	31	11778.	31
4.16	100	14214.	31	8846.	31
6.98	150	14278.	31	6237.	31
10.65	200	14319.	31	3960.	31
16.12	250	14365.	31	1994.	31
20.03	300	14400.	31	944.	12
24.23	350	14432.	31	742.	12
29.66	400	14459.	31	545.	12
34.92	450	14490.	31	355.	12
46.98	500	14518.	31	172.	11
61.75	550	14540.	31	42.	3
85.22	600	14558.	31	9.	3
127.38	650	14580.	31	0.	39
221.86	700	14599.	31	0.	39
590.68	750	14612.	31	0.	39

PROB 3 36-IN. DIAMETER PILLS 3-PILE STRUCTURE
 2005 PENETRATION -- VULCAN 040 HAMMER

OTIDE.30, MINIMUM WALL THICKNESS=.75 IN. HUI = 50

TABLE 10 -- SPECIFIED MIN. DATA

TIP RESISTANCE PERCENTAGE = 50.00

BLDS PER FOOT	RESISTANCE TONS
327.38	650.
221.86	700.
234.06	700.
279.84	715.
	750.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACME 3-PILE STRUCTURE -- HOHNG 1
 APRIL 19 1976

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36-IN. DIAMETER PILES 3-PILE STRUCTURE
 200FT PENETRATION -- VULCAN 040 HAMMER
 OTTDS.025, MINIMUM MAIL THICKNESS=1.25 IN. RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED ALLOW CURVE OPTION	1
OUTPUT OPTION FOR STRESS	1
RPE FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX ALLOWS FOR RESISTANCE-BLOW CURVE (RPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2700000.00
2	1000.00	27000.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TON)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACW 3-PILE STRUCTURE -- HOKING 1
 APRIL 19 1976

PROB
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36-IN. DIAMETER PILES 3-PILE STRUCTURE
 200FT PENETRATION -- VULCAN 040 HAMMER
 DTTPS, 025, MINIMUM WALL THICKNESS=1.25 IN. RU = 10

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED ALLOW COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
RPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX ROLWS FOR RESISTANCE-ALLOW CURVE (RPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LR)	AREA (SQ IN)	COFF OF RESTITUTION	SPRING CONSTANT (LR / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1			
MATERIAL TYPE	(TON)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	290000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS

NUMBER OF SECTIONS ALLOWED

NUMBER OF SECTIONS ALLOWED 0
LENGTH OF FREE STANDING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER	
				TIP	BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	130.	190	320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPING RESISTANCE - JSIDE .15
POINT DAMPING RESISTANCE - JPONT .15
SOIL SHAKE FOR SIDE - QSIDE .10
SOIL SHAKE FOR POINT - QPOINT .03

TIP RESISTANCE
PERCENTAGE

14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB

POCKET PENETRATION -- 3/4-IN. DIAMETER PILES 3-PILE STRUCTURE
VULCAN 040 HAMMER

Q-TYPE, 0.25 MINIMUM WALL THICKNESS 1.25 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	COEF RSTYU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4024.40	136.46	1.00	38052252.
26	-78.67	0.00	4024.40	136.46	1.00	38052252.
27	-87.33	0.00	4024.40	136.46	1.00	38052252.
28	-96.00	0.00	4024.40	136.46	1.00	38052252.
29	-104.67	0.00	4024.40	136.46	1.00	38052252.
30	-113.33	0.00	4024.40	136.46	1.00	38052252.
31	-122.00	0.00	4024.40	136.46	1.00	38052252.
32	-130.67	0.00	4024.40	136.46	1.00	38052252.
33	-139.33	0.00	4024.40	136.46	1.00	38052252.
34	-148.00	0.00	4024.40	136.46	1.00	38052252.
35	-156.67	0.00	4024.40	136.46	1.00	38052252.
36	-165.33	0.00	4024.40	136.46	1.00	38052252.
37	-174.00	0.00	4024.40	136.46	1.00	38052252.
38	-182.67	0.00	4024.40	136.46	1.00	38052252.
39	-191.33	1000.00	4024.40	136.46	1.00	38052252.

DRUM

CONST PENETRATION -- 30-IN. DIAMETER PILES 4-PTIF STRUCTURE
VULCAN OUN HAMMER

TYPE -- 0.25 IN. MINIMUM WALL THICKNESS -- 1.25 IN. RHO = 14

TABLE A -- MAXIMUM STRESS DATA

TYP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0374 INCHES

NUMBER OF HITS PER POINT = 321.13

TOTAL INTERVALS = 133

SEC	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	D MAX (M) IN.	D (M) IN.	V (M) FT/SEC
1	0.00	1781759.	31	0.	74	1.000	1.146375	1.170335	-0.75
2	0.00	1442024.	41	0.	0	1.000	.774623	.717423	-0.65
3	120.00	10844.	43	0.	0	136.463	.760820	.690075	-0.72
4	111.00	10024.	46	0.	0	136.463	.752573	.684238	-0.82
5	102.00	11003.	48	0.	0	136.463	.743825	.672741	-0.94
6	93.00	11141.	51	0.	0	136.463	.734673	.658624	-1.07
7	84.00	11341.	53	0.	0	136.463	.725205	.643946	-1.22
8	75.00	11543.	56	0.	0	136.463	.715450	.628709	-1.40
9	66.00	11716.	58	0.	0	136.463	.705433	.612879	-1.57
10	57.00	11891.	60	0.	0	136.463	.694898	.596519	-1.75
11	48.00	12019.	62	0.	0	136.463	.683424	.579528	-1.91
12	39.00	12137.	65	0.	0	136.463	.670774	.561916	-2.06
13	30.00	10285.	67	0.	0	162.578	.658405	.543687	-2.19
14	21.47	10417.	69	0.	0	162.578	.644714	.529008	-2.28
15	13.33	10583.	72	0.	0	162.578	.631363	.513477	-2.34
16	5.00	10766.	74	0.	0	162.578	.616657	.498328	-2.38
17	-3.33	10896.	76	0.	0	162.578	.600433	.482435	-2.40
18	-11.67	10954.	78	0.	0	162.578	.582759	.466238	-2.39
19	-20.00	10977.	81	0.	0	162.578	.563660	.449612	-2.36
20	-28.33	10959.	83	0.	0	162.578	.543180	.432538	-2.33
21	-36.67	10876.	85	0.	0	162.578	.521364	.414934	-2.30
22	-45.00	10742.	88	0.	0	162.578	.498334	.396665	-2.27
23	-53.33	10577.	90	0.	0	162.578	.474189	.377657	-2.24
24	-61.67	10420.	93	0.	0	162.578	.448491	.357932	-2.21
25	-70.00	12144.	95	0.	0	136.463	.422463	.337563	-2.16
26	-78.67	11410.	98	0.	0	136.463	.390221	.311813	-2.05
27	-87.33	11034.	100	0.	0	136.463	.357682	.285452	-1.93
28	-96.00	10904.	103	0.	0	136.463	.325346	.260290	-1.79
29	-104.67	10774.	106	0.	0	136.463	.293348	.235299	-1.65
30	-113.33	9849.	109	0.	0	136.463	.261414	.210880	-1.51
31	-122.00	9444.	113	0.	0	136.463	.229448	.187538	-1.36
32	-130.67	8955.	115	0.	0	136.463	.197949	.165580	-1.21
33	-139.33	8389.	115	0.	0	136.463	.168331	.145497	-1.10
34	-148.00	7801.	115	0.	0	136.463	.141513	.127038	-0.97
35	-156.67	6560.	117	0.	0	136.463	.118536	.110463	-0.83
36	-165.33	5549.	118	0.	0	136.463	.100007	.095761	-0.68
37	-174.00	4512.	117	0.	0	136.463	.084981	.083091	-0.49
38	-182.67	3601.	115	0.	0	136.463	.072798	.071997	-0.37

PQNR 4 16-IN. DIAMETER PILES SOFTLY STRUCTURE
 POINT PENETRATION -- VULCAN 040 HAMMER

QTYPE, 0.25, MINIMUM WALL THICKNESS=1.25 IN. RUI = 14

TABLE 9 -- RESISTANCE-CURVE DATA

14.00					
TIP RESISTANCE PERCENTAGE =	BLMS/FT.	RESISTANCE DYNAMIC PT	MAX C STRESS	SFG	MAX T STRESS
		TOTAL-TONS FORCE-TONS	LRS/SQ. FT., NUI.	LRS/SQ. IN., NUI.	
	2.67	50	19.41	11499.	11
	4.17	100	57.03	12042.	12
	6.24	150	52.96	12092.	12
	8.55	200	67.41	12094.	12
	10.89	250	80.51	12096.	12
	13.68	300	92.40	12098.	12
	16.24	350	103.17	12100.	12
	18.14	400	112.92	12102.	12
	20.29	450	121.74	12104.	12
	22.76	500	129.69	12106.	12
	25.61	550	136.85	12108.	12
	28.94	600	143.33	12110.	12
	32.87	650	149.13	12112.	12
	37.59	700	154.24	12114.	12
	43.30	750	158.66	12116.	12
	50.32	800	162.52	12118.	12
	59.09	850	165.87	12120.	12
	70.25	900	168.89	12122.	12
	84.84	950	171.34	12123.	12
	103.53	1000	173.00	12125.	12
	128.55	1050	176.95	12127.	12
	160.80	1100	181.92	12130.	12
	200.17	1150	187.09	12132.	12
	250.96	1200	192.35	12134.	12
	321.13	1250	197.66	12144.	25

PROB 4 36-IN. DIAMETER PILES 3-PIE STRUCTURE
200FT PENETRATION -- VULCAN OGD HAMMER

QTYPE=025, MINIMUM WALL THICKNESS=1.25 IN. RU = 14

TABLE 10 -- SPECIFIED ALLOW DATA.

T-5 RESISTANCE PERCENTAGE = 14.00

HITS PER FOOT	RESISTANCE TONS
128.55	1050.
200.17	1150.
250.06	1200.
321.13	1250.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACMP 3-PILE STRUCTURE -- HITTING 1
 APRIL 19 1976

PROB 5
 36-IN. DIAMETER PILES 3-PILE STRUCTURE
 POINT PENETRATION -- VULCAN 040 HAMMER
 TYPE 10, MINIMUM WALL THICKNESS 1.25 IN. MU = 35

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED WIND LOAD OPTION	1
OUTPUT OPTION FOR STRESS	1
RPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX RUNS FOR RESISTANCE-CURVE	300.
SPECIFIED SEGMENT LENGTH (FT)	-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LRS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF FRICTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2700000.00
2	1000.00	27000.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TON)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	20000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 3

NUMBER OF SECTIONS CHANGED 0
 NUMBER OF SECTIONS ADDED 0
 LENGTH OF FREE STANDING PILE (FT) 120.00

SECTION NUMBER	MATERIAL TYPE	PAIL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP BOTTOM
1	1	1.250	90.	0 90
2	1	1.500	100.	90 190
3	1	1.250	130.	190 320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SOLE DAMPING RESISTANCE - JSIDE .15
 POINT DAMPING RESISTANCE - JPOINT .15
 SOIL QUAKE FOR SIDE .10
 SOIL QUAKE FOR POINT .10

TIP RESISTANCE
 PERCENTAGE

15.0000

TABLE 6 -- SPECIFIED ALLOW COUNT DATA

NUMBER OF SPECIFIED ALLOW COUNTS 4

ALLOW PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 5 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200BT PENETRATION -- VULCAN QDN HAMMER

QTIP=10, MINIMUM WALL THICKNESS=1.25 IN. MU = 35

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	CORR RSTTU	SPR STIFF LRS/IN.
1	0.00	1000.00	40000.00	1.00	1.00	2700000.
2	0.00	1000.00	27000.00	1.00	1.00	36002010.
3	120.00	0.00	4179.19	136.46	1.00	36002010.
4	111.00	0.00	4179.19	136.46	1.00	36002010.
5	102.00	0.00	4179.19	136.46	1.00	36002010.
6	93.00	0.00	4179.19	136.46	1.00	36002010.
7	84.00	0.00	4179.19	136.46	1.00	36002010.
8	75.00	0.00	4179.19	136.46	1.00	36002010.
9	66.00	0.00	4179.19	136.46	1.00	36002010.
10	57.00	0.00	4179.19	136.46	1.00	36002010.
11	48.00	0.00	4179.19	136.46	1.00	36002010.
12	39.00	0.00	4179.19	136.46	1.00	36002010.
13	30.00	0.00	4610.13	162.54	1.00	47107562.
14	21.67	0.00	4610.13	162.54	1.00	47107562.
15	13.33	0.00	4610.13	162.54	1.00	47107562.
16	5.00	0.00	4610.13	162.54	1.00	47107562.
17	-3.33	0.00	4610.13	162.54	1.00	47107562.
18	-11.67	0.00	4610.13	162.54	1.00	47107562.
19	-20.00	0.00	4610.13	162.54	1.00	47107562.
20	-28.33	0.00	4610.13	162.54	1.00	47107562.
21	-36.67	0.00	4610.13	162.54	1.00	47107562.
22	-45.00	0.00	4610.13	162.54	1.00	47107562.
23	-53.33	0.00	4610.13	162.54	1.00	47107562.
24	-61.67	0.00	4610.13	162.54	1.00	47107562.
25	-70.00	0.00	4024.40	136.46	1.00	38052252.
26	-78.67	0.00	4024.40	136.46	1.00	38052252.
27	-87.33	0.00	4024.40	136.46	1.00	38052252.
28	-96.00	0.00	4024.40	136.46	1.00	38052252.
29	-104.67	0.00	4024.40	136.46	1.00	38052252.
30	-113.33	0.00	4024.40	136.46	1.00	38052252.
31	-122.00	0.00	4024.40	136.46	1.00	38052252.
32	-130.67	0.00	4024.40	136.46	1.00	38052252.
33	-139.33	0.00	4024.40	136.46	1.00	38052252.
34	-148.00	0.00	4024.40	136.46	1.00	38052252.
35	-156.67	0.00	4024.40	136.46	1.00	38052252.
36	-165.33	0.00	4024.40	136.46	1.00	38052252.
37	-174.00	0.00	4024.40	136.46	1.00	38052252.
38	-182.67	0.00	4024.40	136.46	1.00	38052252.
39	-191.33	1000.00	4024.40	136.46	1.00	38052252.

PROG 5 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN OIL MANNER

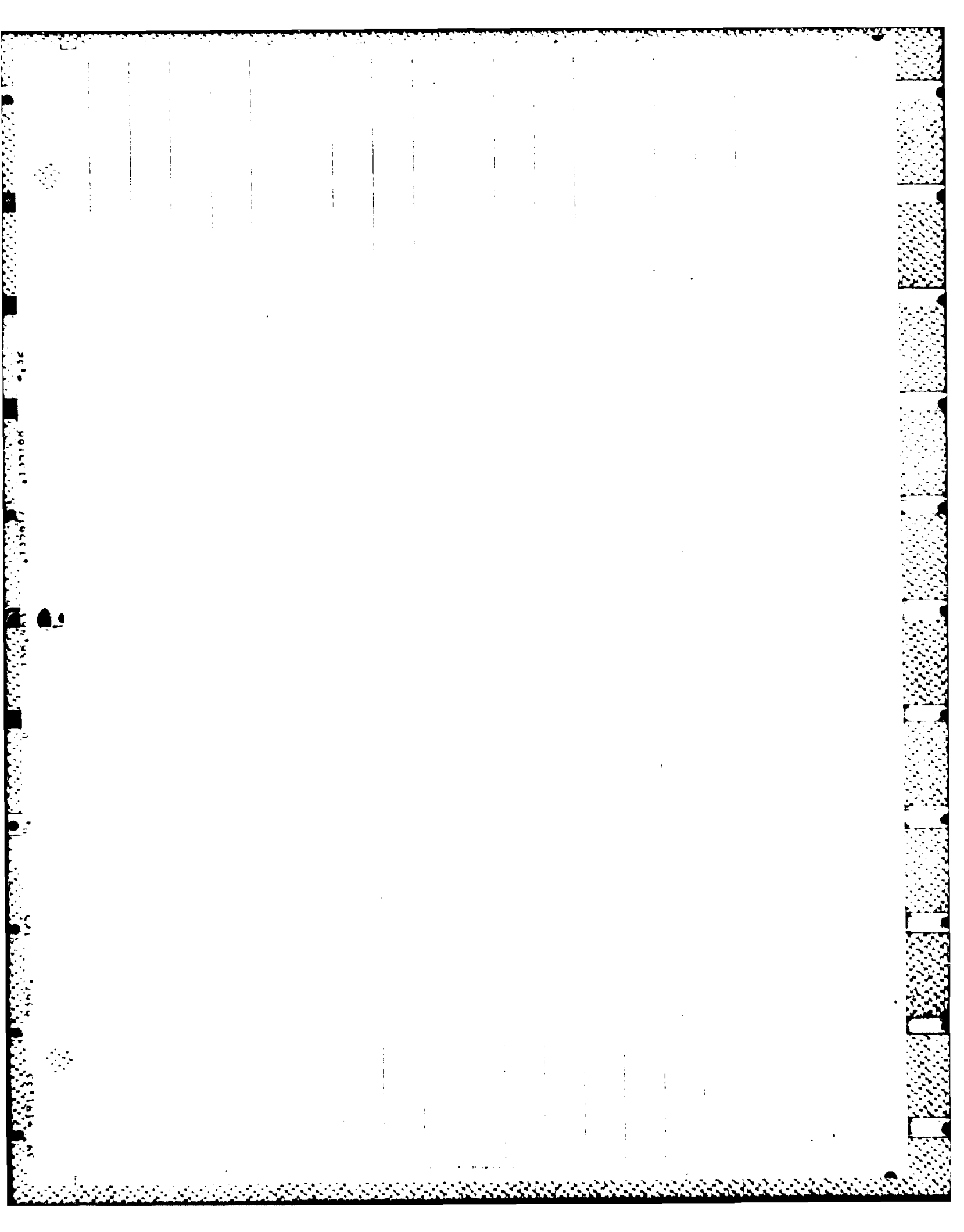
OTYPE=10, MINIMUM WALL THICKNESS=1.25 IN. RU = 35

TABLE A -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 35.00

PERMANENT SET OF PILE = .0356 INCHES
NUMBER OF H/LMS PER FOOT = 336.92
TOTAL INTERVALS = 137

SEC	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME H	MAX T STRESS LBS/SQ.IN.	TIME I	AREA SQ.IN.	UMAX(M) IN.	DM (M) IN.	V(M) FT/SEC
1	0.00	1781759.	31	0.	74	1.000	1.200510	1.180993	-0.66
2	0.00	1482024.	41	0.	0	1.000	.788225	.752172	-0.30
3	120.00	10488.	43	0.	0	136.463	.774077	.736565	-0.14
4	111.00	10920.	46	0.	0	136.463	.766380	.726966	-0.39
5	102.00	11003.	48	0.	0	136.463	.757970	.716608	-0.47
6	93.00	11161.	51	0.	0	136.463	.749476	.705634	-0.57
7	84.00	11341.	53	0.	0	136.463	.741143	.693941	-0.70
8	75.00	11533.	56	0.	0	136.463	.73325	.681609	-0.84
9	66.00	11715.	58	0.	0	136.463	.725806	.668721	-1.01
10	57.00	11879.	60	0.	0	136.463	.718099	.655258	-1.18
11	48.00	12012.	62	0.	0	136.463	.709893	.641313	-1.35
12	39.00	12117.	64	0.	0	136.463	.701021	.626845	-1.51
13	30.00	10242.	67	0.	0	162.578	.691370	.611863	-1.65
14	21.67	10358.	69	0.	0	162.578	.683052	.599807	-1.73
15	13.33	10450.	71	0.	0	162.578	.673714	.587356	-1.80
16	5.00	10566.	73	0.	0	162.578	.663257	.574608	-1.85
17	-3.33	10635.	75	0.	0	162.578	.651550	.561600	-1.88
18	-11.67	10636.	78	0.	0	162.578	.638581	.548343	-1.89
19	-20.00	10620.	80	0.	0	162.578	.624308	.534857	-1.90
20	-28.33	10573.	82	0.	0	162.578	.608644	.521012	-1.91
21	-36.67	10493.	84	0.	0	162.578	.591736	.506647	-1.94
22	-45.00	10387.	87	0.	0	162.578	.573520	.491593	-1.99
23	-53.33	10274.	90	0.	0	162.578	.554098	.475692	-2.05
24	-61.67	10184.	92	0.	0	162.578	.533648	.458872	-2.08
25	-70.00	10078.	95	0.	0	136.463	.512360	.441301	-2.08
26	-78.67	11795.	97	0.	0	136.463	.484718	.414039	-2.05
27	-87.33	11571.	99	0.	0	136.463	.449094	.396222	-1.99
28	-96.00	11308.	102	0.	0	136.463	.432716	.373285	-1.91
29	-104.67	10998.	104	0.	0	136.463	.405850	.350297	-1.84
30	-113.33	10600.	106	0.	0	136.463	.377799	.327332	-1.76
31	-122.00	10099.	108	0.	0	136.463	.348465	.304310	-1.70
32	-130.67	9787.	113	0.	0	136.463	.318816	.281138	-1.63
33	-139.33	9750.	116	0.	0	136.463	.288417	.258012	-1.50
34	-148.00	9514.	118	0.	0	136.463	.259263	.235668	-1.28
35	-156.67	9056.	117	0.	0	136.463	.231088	.210590	-1.11
36	-165.33	8542.	119	0.	0	136.463	.203331	.194150	-0.95
37	-174.00	7977.	124	0.	0	136.463	.178446	.174065	-0.76
38	-182.67	7454.	127	0.	0	136.463	.150116	.145816	-0.52



PROB S 30-IN. DIAMETER PILES 3-PTIE STRUCTURE
200FT PENETRATION -- VULCAN 640 HAMMER

QTTP=10, MINIMUM WALL THICKNESS=1.25 IN. RU = 35

TABLE 9 -- RESISTANCE-HLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS/FT.	RESISTANCE DYNAMIC PT	MAX C STRESS	SFG	MAX T STRESS	SEG
	TOTAL-TONS FORCES-TONS	LBS/SQ. IN. NO.	LBS/SQ. IN. NO.	LBS/SQ. IN. NO.	
2.54	50%	44.42	11	9441.	25
4.10	100%	92.09	12	4050.	25
6.32	150%	131.44	12	6996.	25
9.05	200%	167.03	12	5478.	25
11.84	250%	199.19	12	4069.	26
15.43	300%	228.29	12	3518.	A
17.91	350%	254.65	12	2437.	A
20.30	400%	278.52	12	1437.	27
23.09	450%	300.11	12	574.	27
26.37	500%	319.61	12	0.	39
30.27	550%	337.19	12	0.	39
35.00	600%	353.01	12	0.	39
40.41	650%	367.31	12	0.	39
44.11	700%	380.14	12	0.	39
57.53	750%	391.78	12	0.	39
69.98	800%	402.06	12	0.	39
87.06	850%	410.80	12	0.	39
111.64	900%	414.11	12	0.	39
140.29	950%	424.68	12	0.	39
212.69	1000%	430.46	12	0.	39
336.92	1050%	434.42	12	0.	39

PRNH

5 3/4 IN. DIAMETER PILES SODILE STRUCTURE
200 FT PENETRATION -- VULCAN DRUM HAMMER

OTTP=10, MINIMUM WALL THICKNESS=1.25 IN. RU = 35

TABLE 10 -- SPECIFIED ALLOW DATA

TIP RESISTANCE PERCENTAGE = 35.00

ALLOW PER FOOT	RESISTANCE TONS
149.20	950.
212.60	1000.
241.07	1015.
289.30	1035.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 NC CLELLAND REPORT DATA FOR ACHR 3-PILE STRUCTURE -- HITTING 1
 APRIL 19 1974

PROB
 6

36-IN. DIAMETER PILES 3-PILE STRUCTURE
 2000T PENETRATION -- VULCAN 040 HAMMER
 GTYPE=30, MINIMUM WALL THICKNESS=1.25 IN. RU = 50

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED PLOW COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
PPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX PLOWS FOR RESISTANCE-HIGH CURVE (HPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF FRICTION	SPRING CONSTANT (LR / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(THICK)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS

NUMBER OF SECTIONS ALONG
LENGTH OF FREE STANDING PILE (FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	150.	190	320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE • JSTOE .15
POINT DAMPENING RESISTANCE • JPOINT .15
SOIL QUAKE FOR SIDE • QSIDE .10
SOIL QUAKE FOR POINT • QPOINT .30

TIP RESISTANCE
PERCENTAGE

50.0000

TABLE 6 -- SPECIFIED ALLOW COUNT DATA

NUMBER OF SPECIFIED ALLOW COUNTS 4

BLINDS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

P000 200FT PENETRATION -- 50-IN. DIAMETER PILES 50-PILE STRUCTURE
 -- VULCAN ODN HAMMER

QTYPE=30, MINIMUM WALL THICKNESS=1.25 IN. Q11 = 50

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	FLYV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	CHEF RS TTU	SPR STIFF LRS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	95.00	0.00	4179.19	136.46	1.00	36642910.
7	81.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	62.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	44.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.54	1.00	47147562.
14	21.67	0.00	4610.13	162.54	1.00	47147562.
15	13.33	0.00	4610.13	162.54	1.00	47147562.
16	5.00	0.00	4610.13	162.54	1.00	47147562.
17	-3.33	0.00	4610.13	162.54	1.00	47147562.
18	-11.67	0.00	4610.13	162.54	1.00	47147562.
19	-20.00	0.00	4610.13	162.54	1.00	47147562.
20	-24.33	0.00	4610.13	162.54	1.00	47147562.
21	-34.67	0.00	4610.13	162.54	1.00	47147562.
22	-45.00	0.00	4610.13	162.54	1.00	47147562.
23	-55.33	0.00	4610.13	162.54	1.00	47147562.
24	-61.67	0.00	4610.13	162.54	1.00	47147562.
25	-70.00	0.00	4024.40	136.46	1.00	34052252.
26	-74.67	0.00	4024.40	136.46	1.00	34052252.
27	-87.33	0.00	4024.40	136.46	1.00	34052252.
28	-94.00	0.00	4024.40	136.46	1.00	34052252.
29	-104.67	0.00	4024.40	136.46	1.00	34052252.
30	-113.33	0.00	4024.40	136.46	1.00	34052252.
31	-122.00	0.00	4024.40	136.46	1.00	34052252.
32	-130.67	0.00	4024.40	136.46	1.00	34052252.
33	-139.33	0.00	4024.40	136.46	1.00	34052252.
34	-148.00	0.00	4024.40	136.46	1.00	34052252.
35	-156.67	0.00	4024.40	136.46	1.00	34052252.
36	-165.33	0.00	4024.40	136.46	1.00	34052252.
37	-174.00	0.00	4024.40	136.46	1.00	34052252.
38	-182.67	0.00	4024.40	136.46	1.00	34052252.
39	-191.33	1000.00	4024.40	136.46	1.00	34052252.

PROB

200 FT PENETRATION -- 36-IN. DIAMETER PILES 5-PTIF STRUCTURE

OTITE, 30-MINIMUM WALL THICKNESS=1.25 IN. RII = 50

TABLE A -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 50.00

PERMANENT SET OF PTIF = .0306 INCHES

NUMBER OF BLDS PER FOOT = 392.41

TOTAL INTERVALS = 141

SEC	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	D MAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1741750.	31	0.	74	1.000	1.225522	1.205312	-0.45
2	0.00	1442020.	41	0.	0	1.000	.812461	.796538	-0.09
3	120.00	10844.	43	0.	0	136.443	.799150	.783940	-0.10
4	111.00	10924.	44	0.	0	136.443	.791164	.777476	-0.13
5	102.00	11003.	44	0.	0	136.443	.782992	.770172	-0.17
6	93.00	11141.	51	0.	0	136.443	.775081	.762013	-0.24
7	84.00	11341.	53	0.	0	136.443	.767920	.753030	-0.32
8	75.00	11535.	54	0.	0	136.443	.762186	.743296	-0.43
9	66.00	11715.	58	0.	0	136.443	.757298	.732855	-0.54
10	57.00	11874.	60	0.	0	136.443	.752556	.721852	-0.68
11	48.00	12004.	62	0.	0	136.443	.747669	.710356	-0.82
12	39.00	12105.	64	0.	0	136.443	.742445	.698502	-0.94
13	30.00	10214.	67	0.	0	162.578	.734544	.686389	-1.07
14	21.67	10245.	69	0.	0	162.578	.731299	.678837	-1.13
15	13.33	10364.	71	0.	0	162.578	.725213	.667244	-1.17
16	5.00	10434.	73	0.	0	162.578	.718142	.657676	-1.17
17	-3.33	10464.	75	0.	0	162.578	.710017	.648248	-1.16
18	-11.67	10453.	77	0.	0	162.578	.700490	.639032	-1.13
19	-20.00	10341.	79	0.	0	162.578	.690164	.629963	-1.11
20	-28.33	10312.	82	0.	0	162.578	.678440	.620902	-1.13
21	-36.67	10231.	84	0.	0	162.578	.665569	.611445	-1.18
22	-45.00	10132.	86	0.	0	162.578	.651543	.601724	-1.24
23	-53.33	10044.	89	0.	0	162.578	.636555	.591240	-1.29
24	-61.67	9945.	91	0.	0	162.578	.620463	.580255	-1.31
25	-70.00	11816.	94	0.	0	136.443	.610464	.568923	-1.24
26	-78.67	11714.	96	0.	0	136.443	.598655	.554716	-1.23
27	-87.33	11586.	98	0.	0	136.443	.589592	.540502	-1.17
28	-96.00	11436.	101	0.	0	136.443	.572054	.526314	-1.13
29	-104.67	11248.	103	0.	0	136.443	.553602	.511900	-1.14
30	-113.33	10970.	105	0.	0	136.443	.514445	.496406	-1.18
31	-122.00	10536.	106	0.	0	136.443	.495862	.480445	-1.21
32	-130.67	9915.	107	0.	0	136.443	.477755	.464258	-1.18
33	-139.33	9341.	113	0.	0	136.443	.459167	.446923	-1.17
34	-148.00	9251.	116	0.	0	136.443	.439553	.428638	-1.12
35	-156.67	8943.	117	0.	0	136.443	.419005	.409713	-1.00
36	-165.33	8512.	117	0.	0	136.443	.397252	.390606	-0.85
37	-174.00	8249.	124	0.	0	136.443	.374724	.371241	-0.71
38	-182.67	8140.	127	0.	0	136.443	.352645	.341218	-0.52

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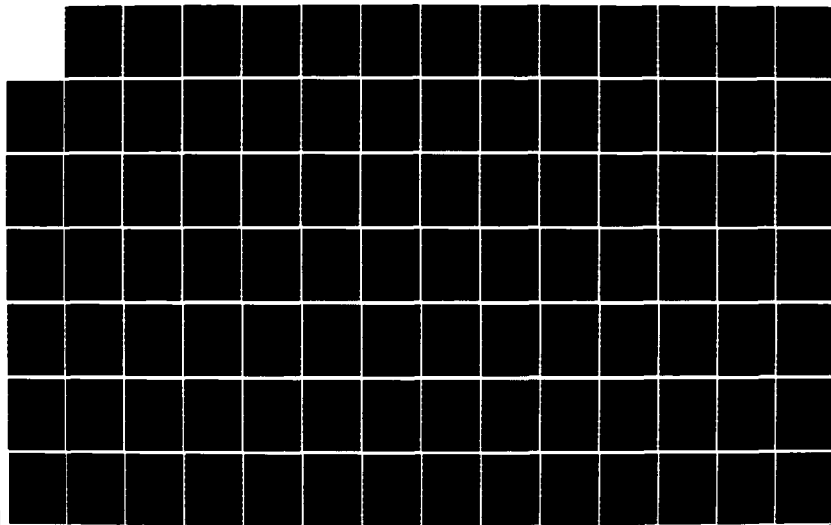
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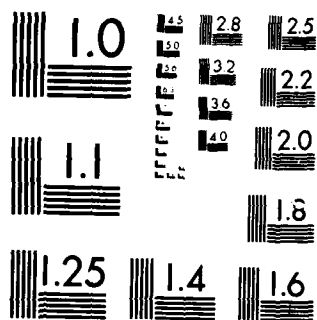
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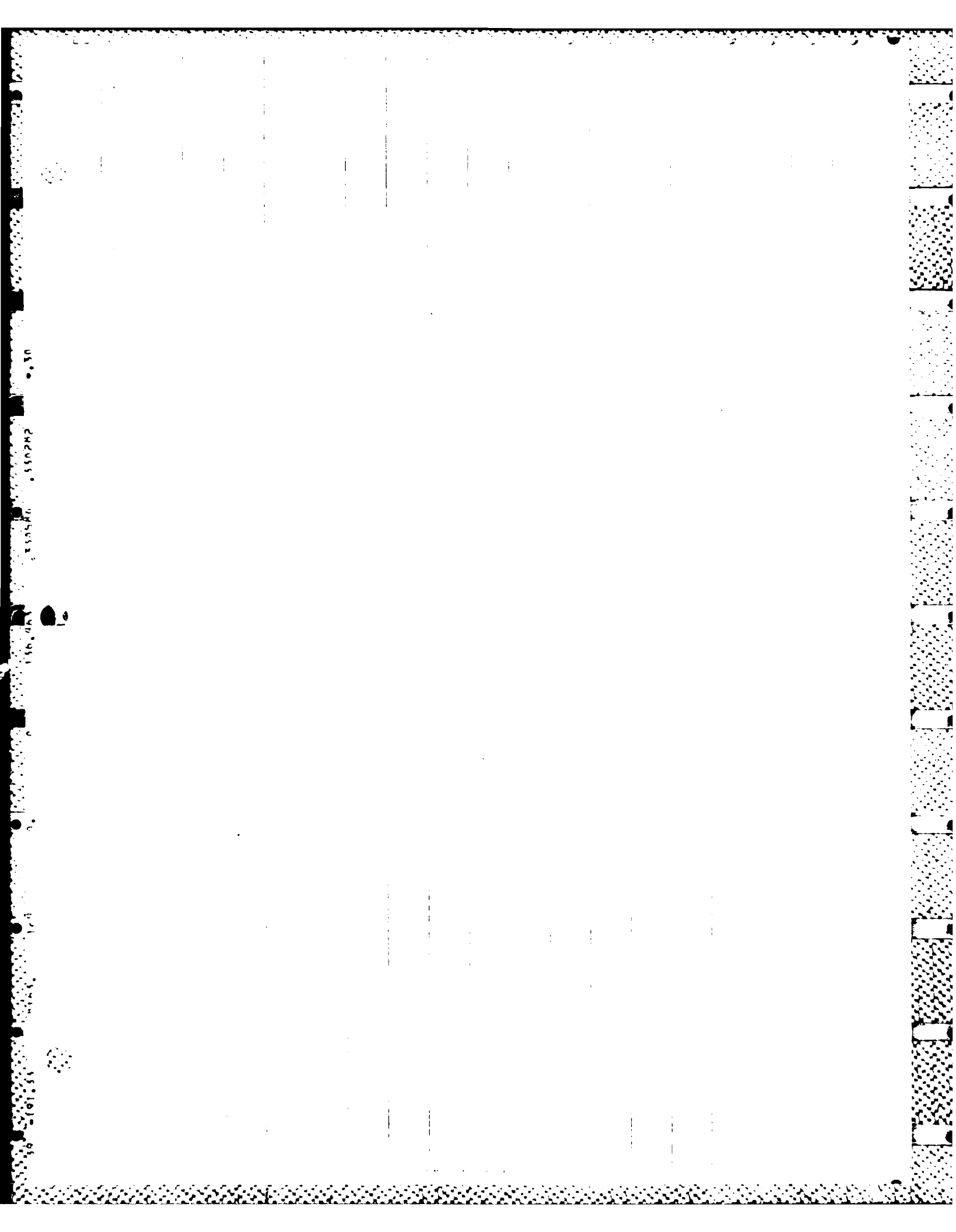
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MICROCOPY RESOLUTION TEST CHART
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PRIM 36-IN. DIAMETER PILES (PILE STRUCTURE)
 POINT PENETRATION -- VULCAN OIL HAMMER

OTITE, 10-MINIMUM WALL THICKNESS 1.25 IN. RII = 50

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TYP RESISTANCE PERCENTAGE = 50.00						
BLOWS/FT.	RESISTANCE DYNAMIC PT	MAX C STRESS	SEC MAX T STRESS			SIG
TOTAL-TONS FORCE-TONS		LRG/SQ. IN. MIN.	LRG/SQ. IN. MIN.			
2.45	50.	69.04	11744.	11	9772.	25
4.04	100.	131.11	12047.	12	8273.	25
6.55	150.	144.92	12049.	12	6750.	25
10.01	200.	237.13	12090.	12	5368.	25
13.45	250.	242.53	12091.	12	4078.	25
19.36	300.	325.47	12042.	12	2955.	0
22.66	350.	360.30	12044.	12	2140.	0
26.65	400.	393.86	12045.	12	963.	25
31.57	450.	423.97	12046.	12	104.	27
37.77	500.	451.44	12047.	12	0.	39
45.81	550.	475.95	12048.	12	0.	39
56.60	600.	497.54	12049.	12	0.	39
71.79	650.	519.05	12100.	12	0.	39
94.59	700.	539.55	12101.	12	0.	39
132.12	750.	552.64	12103.	12	0.	39
204.11	800.	559.94	12104.	12	0.	39
392.41	850.	556.99	12105.	12	0.	39

PRIM

200FT PENETRATION -- 50-IN. DIAMETER PILES 4-PILE STRUCTURE
-- VIB CAN 020 HAMMER

Q1P=30, MINIMUM WALL THICKNESS 1.25 IN. RII = 50

TABLE 10 -- SPECIFIED MIN. DATA

TYP RESISTANCE PERCENTAGE = 50.00

ALONG PER FOOT	RESISTANCE TONS
132.12	750
204.11	800
232.69	812
293.00	831

IVJ0JVC. 04/20/76. UNITED COMPUTING* 67. APTX/SI. 4.0.24

```
09.1A.44SPIL*CM100*1000.
09.1A.44SFL 44 0.000
09.1A.453AC3400CAR0023.27771000C 14
09.1A.45. 04/20/76.IVJ0JVC
09.1A.45.4FL*40000.
09.1A.45SFL 3302 0.001
09.1A.45SFL 16344 0.001
09.1A.45.WAP*OFF.
09.1A.45SFL 256 0.001
09.1A.45.GET*PILR(CAR0024)
09.1A.49.READY = PILR
09.1A.49SFL 4096 0.002 0 0.
09.1A.49SFI 72 1
09.1A.49.PILR,
09.1A.49SFL00 16344 0.002
09.1A.50SFL01 16344 0.144 140 A
09.1A.50.PL REQ*THEN TO LOAD 36370H ( 15608)
09.1A.51.PL REQ*THEN TO EXECUTE 34000H ( 14336)
09.1A.51SFL 16344 0.144
09.19.57.END PTENDI
09.19.57.CUST.
09.19.57SFL 14336 52.444 16A 1P
09.19.5A. SERVICE UNITS= 137.6
09.19.5A. JOM COSTS= 34.40
09.19.5ASFL 12284 52.442 7 5
09.19.58.EXIT.
09.19.58J100 2368 52.442
09.19.58. *FL* *CPU SEC. *DISC PRUS* DISC ACC
09.19.58.*P.F. PRUS*P.F. ACC *TAPE PRUS* TAPE ACC
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Pile Driving Resistance Curves

Pile Diameter	- 30 in.
Minimum Wall Thickness	- .75 in.
	- 1.25 in.
Penetration	- 150 ft.
Hammer	- Vulcan 040
Quake Factor, tip	- .025 in.
	- .10 in.
	- .30 in.

UNITED COMPUTING 67. APTX/SL. B.0.24

19.08.13. 04/19/76.

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WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACHR 3-PILE STRUCTURE -- RORING 1
 APRIL 19 1974

PROH

1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
 150FT PENETRATION -- VULCAN 040 HAMMER
 OTTPE.025, MINIMUM WALL THICKNESS=.75 IN. RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED ALLOW COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
BPF FOR STRESS OUTPUT OPTION	1
ULTIMATE RESISTANCE INCREMENT (TONS)	275.
MAX BLOWS FOR RESISTANCE-HLOW CURVE (RPF)	50.0
SPECIFIED SEGMENT LENGTH (FT)	300.
	=0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	=0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLA ² (IN ⁴)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TOD)	UNIT WT. (PCF)	MODULUS (PSI)
1	16.000	490.0	20000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS	4
NUMBER OF SECTIONS CHANGED	0

LENGTH OF FREE STANDING PILE (FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	50.	190	240
4	1	.750	30.	240	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SIDE DAMPENING RESISTANCE - JSIDE .15
 POINT DAMPENING RESISTANCE - JPOINT .15
 SOIL SHAKE FOR SIDE - OSIDE .10
 SOIL SHAKE FOR POINT - OPOINT .03

TIP RESISTANCE
PERCENTAGE

14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB

150FT PENETRATION -- 3/4-IN. DIAMETER PILES 3-PILE STRUCTURE
-- VULCAN OUN HAMMER

QTIPS, 0.25, MINIMUM WALL THICKNESS, 7.5 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	FLYV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	COEF RSTTU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	3869.62	136.46	1.00	39574342.
26	-78.33	0.00	3869.62	136.46	1.00	39574342.
27	-86.67	0.00	3869.62	136.46	1.00	39574342.
28	-95.00	0.00	3869.62	136.46	1.00	39574342.
29	-103.33	0.00	3869.62	136.46	1.00	39574342.
30	-111.67	0.00	3869.62	136.46	1.00	39574342.
31	-120.00	0.00	2826.21	83.06	1.00	20071479.
32	-130.00	0.00	2826.21	83.06	1.00	20071479.
33	-140.00	1000.00	2826.21	83.06	1.00	20071479.

PROB 1 36-IN. DIAMETER PILLS 3-DTIF STRUCTURE
150FT PENETRATION -- VULCAN 000 MANTLE

QTYPE, 025, MINIMUM WALL THICKNESS, 75 IN. MU = 14

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILF = .0367 INCHES

NUMBER OF BLDS PER FOOT = 327.21

TOTAL INTERVALS = 131

SEC	ELEV FT	MAX C STRESS LBS/SQ. IN.	TIME N	MAX T STRESS LBS/SQ. IN.	TIME N	AREA SQ. IN.	D MAX (M) IN.	D (M) IN.	V (M) FT/SEC
1	0.00	1781868.	34	0.	81	1.000	1.171165	1.170179	-.22
2	0.00	1481874.	45	0.	0	1.000	.760521	.762812	-.97
3	120.00	10887.	47	0.	0	136.443	.746588	.681076	-1.14
4	111.00	10926.	50	0.	0	136.443	.738074	.669082	-1.33
5	102.00	11004.	53	0.	0	136.443	.728692	.654424	-1.51
6	93.00	11160.	56	0.	0	136.443	.718454	.639069	-1.67
7	84.00	11341.	58	0.	0	136.443	.707286	.623030	-1.81
8	75.00	11535.	61	0.	0	136.443	.695039	.606445	-1.94
9	66.00	11714.	63	0.	0	136.443	.681653	.589162	-2.07
10	57.00	11884.	66	0.	0	136.443	.666971	.571261	-2.20
11	48.00	12035.	68	0.	0	136.443	.650746	.552548	-2.32
12	39.00	12186.	71	0.	0	136.443	.632767	.53447	-2.45
13	30.00	12341.	74	0.	0	162.574	.612687	.512267	-2.58
14	21.67	12604.	77	0.	0	162.574	.595185	.495080	-2.67
15	13.33	12893.	79	0.	0	162.574	.575340	.476832	-2.74
16	5.00	13215.	82	0.	0	162.574	.553536	.457504	-2.78
17	-3.33	13481.	84	0.	0	162.574	.529821	.437089	-2.77
18	-11.67	13656.	87	0.	0	162.574	.504088	.415795	-2.70
19	-20.00	13756.	90	0.	0	162.574	.477702	.393761	-2.57
20	-28.33	13758.	92	0.	0	162.574	.449881	.371106	-2.40
21	-36.67	13808.	94	0.	0	162.574	.42181	.347969	-2.25
22	-45.00	13806.	97	0.	0	162.574	.389820	.324248	-2.10
23	-53.33	13910.	100	0.	0	162.574	.357667	.300292	-1.93
24	-61.67	13933.	104	0.	0	162.574	.324909	.274236	-1.78
25	-70.00	12185.	106	0.	0	136.443	.291907	.252292	-1.61
26	-78.33	11642.	109	0.	0	136.443	.258743	.224633	-1.44
27	-86.67	10633.	110	0.	0	136.443	.220241	.198400	-1.25
28	-95.00	9418.	112	0.	0	136.443	.186678	.173932	-1.15
29	-103.33	8093.	114	0.	0	136.443	.160226	.151145	-1.01
30	-111.67	6734.	117	0.	0	136.443	.136047	.130587	-.84
31	-120.00	8345.	118	0.	0	136.443	.118065	.112567	-.67
32	-130.00	6226.	120	0.	0	136.443	.084694	.083694	-.50
33	-140.00	4791.	117	0.	0	136.443	.061674	.061513	-.17

PROB 1 30-IN. 60-METER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

OTYPE, 0.25, MINIMUM WALL THICKNESS .75 IN. RU = 14

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE DYNAMIC PT	MAX C STRESS	SEG MA	T STRESS	SEG
TOTAL-TONS	FORCE-TONS	LBS/SQ. IN. NO.	LBS/SQ. IN. NO.	IN. NO.	
2.92	500	19.65	12	8525.	12
4.34	1000	37.37	12	7105.	11
6.42	1500	53.44	12	5879.	10
9.14	2000	68.06	12	4702.	9
11.68	2500	81.36	12	3690.	8
15.38	3000	93.45	12	2811.	7
17.07	3500	104.43	12	2023.	6
18.98	4000	114.41	12	755.	5
21.15	4500	123.51	12	45.	4
23.65	5000	131.71	12	0.	3
26.54	5500	139.10	12	0.	3
29.92	6000	145.74	12	0.	3
33.92	6500	151.52	12	0.	3
38.69	7000	156.58	12	0.	3
44.46	7500	161.01	12	0.	3
51.56	8000	164.90	12	0.	3
60.44	8500	168.21	12	0.	3
71.73	9000	170.68	12	0.	3
86.38	9500	172.13	12	0.	3
105.94	10000	174.56	12	0.	3
132.05	10500	176.44	12	0.	3
164.60	11000	178.89	12	0.	3
204.92	11500	181.52	12	0.	3
256.51	12000	185.05	12	0.	3
327.21	12500	188.96	12	0.	3

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

OTPR.025, MINIMUM WALL THICKNESS=.75 IN. RU = 14

TABLE 10 -- SPECIFIED RULOW DATA

TIP RESISTANCE PERCENTAGE =	14.00
BLOWS PFR	RESISTANCE
FOOT	TONS
132.05	1050.
204.92	1150.
256.51	1200.
296.68	1231.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACWR 3-PILE STRUCTURE -- DURING 1
 APRIL 19 1976

PROB

2

36-IN. DIAMETER PILES 3-PILE STRUCTURE
 150FT PENETRATION -- VULCAN 040 HAMMER
 OTIPS, 10, MINIMUM WALL THICKNESS=.75 IN. RU = 35

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED RLOW COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
HPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX RLOW'S FOR RESISTANCE-RLOW CURVE (HPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LR / IN)
1	1000.00	40000.00	1.00	.60	2750000.00
2	1000.00	27500.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TON)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	290000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS	4
NUMBER OF SECTIONS CHANGED	0

NUMBER OF SECTIONS CHANGED 0
 NUMBER OF SECTIONS ADDED 0
 LENGTH OF FREE STANDING PILE (FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP BOTTOM
1	1	1.250	90.	0 90
2	1	1.500	100.	90 190
3	1	1.250	50.	190 240
4	1	.750	50.	240 270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SIDE DAMPING RESISTANCE - JSIDE .15
 POINT DAMPING RESISTANCE - JPOINT .15
 SOIL SHAKE FOR SIDE - OSIDE .10
 SOIL SHAKE FOR POINT - OPOINT .10

TIP RESISTANCE
 PERCENTAGE

35.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 2 150FT PENETRATION -- 14-IN. DIAMETER PILES 3-PILE STRUCTURE
 150FT PENETRATION -- VULCAN ODD HAMMER

OTTP=10, MINIMUM WALL THICKNESS=75 IN. RU = 35

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	COEFF HSTTU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2700000.
2	0.00	1000.00	27000.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4010.13	162.58	1.00	47147562.
14	21.67	0.00	4010.13	162.58	1.00	47147562.
15	13.33	0.00	4010.13	162.58	1.00	47147562.
16	5.00	0.00	4010.13	162.58	1.00	47147562.
17	-3.33	0.00	4010.13	162.58	1.00	47147562.
18	-11.67	0.00	4010.13	162.58	1.00	47147562.
19	-20.00	0.00	4010.13	162.58	1.00	47147562.
20	-28.33	0.00	4010.13	162.58	1.00	47147562.
21	-36.67	0.00	4010.13	162.58	1.00	47147562.
22	-45.00	0.00	4010.13	162.58	1.00	47147562.
23	-53.33	0.00	4010.13	162.58	1.00	47147562.
24	-61.67	0.00	4010.13	162.58	1.00	47147562.
25	-70.00	0.00	3869.62	136.46	1.00	39574342.
26	-78.33	0.00	3869.62	136.46	1.00	39574342.
27	-86.67	0.00	3869.62	136.46	1.00	39574342.
28	-95.00	0.00	3869.62	136.46	1.00	39574342.
29	-103.33	0.00	3869.62	136.46	1.00	39574342.
30	-111.67	0.00	3869.62	136.46	1.00	39574342.
31	-120.00	0.00	2826.21	83.06	1.00	20071879.
32	-130.00	0.00	2826.21	83.06	1.00	20071879.
33	-140.00	1000.00	2826.21	83.06	1.00	20071879.

PROB 2 36-IN. DIAMETER PILES T-PILE STRUCTURE
150FT PENETRATION -- VULCAN Q40 HAMMER

OTYPE=10, MINIMUM WALL THICKNESS=.75 IN. RU = 35

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 55.00

PERMANENT SET OF PILE = .0250 INCHES
NUMBER OF READS PER FOOT = 480.92
TOTAL INTERVALS = 135

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	D MAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1781868.	34	0.	R1	1.000	1.182726	1.179973	-1.33
2	0.00	1481874.	45	0.	0	1.000	.771284	.722784	-1.56
3	120.00	10887.	47	0.	0	136.463	.757458	.705332	-1.67
4	111.00	10926.	50	0.	0	136.463	.749159	.694071	-1.80
5	102.00	11004.	53	0.	0	136.463	.740264	.682530	-1.93
6	93.00	11160.	56	0.	0	136.463	.730462	.670786	-1.04
7	84.00	11341.	58	0.	0	136.463	.720992	.658660	-1.15
8	75.00	11535.	61	0.	0	136.463	.710650	.646654	-1.25
9	66.00	11713.	63	0.	0	136.463	.699831	.634124	-1.35
10	57.00	11881.	66	0.	0	136.463	.688300	.621157	-1.46
11	48.00	12022.	68	0.	0	136.463	.675691	.607618	-1.59
12	39.00	12147.	71	0.	0	136.463	.661726	.593234	-1.73
13	30.00	10303.	73	0.	0	162.578	.646256	.577842	-1.88
14	21.67	10455.	76	0.	0	162.578	.632416	.564897	-2.00
15	13.33	10641.	78	0.	0	162.578	.618012	.550794	-2.10
16	5.00	10851.	81	0.	0	162.578	.601953	.535559	-2.18
17	-3.33	11007.	83	0.	0	162.578	.584622	.519332	-2.20
18	-11.67	11092.	86	0.	0	162.578	.566150	.502285	-2.16
19	-20.00	11155.	89	0.	0	162.578	.546474	.484415	-2.11
20	-28.33	11132.	91	0.	0	162.578	.525528	.466299	-2.06
21	-36.67	11030.	93	0.	0	162.578	.503193	.447276	-1.99
22	-45.00	10810.	96	0.	0	162.578	.479284	.427583	-1.91
23	-53.33	10487.	98	0.	0	162.578	.453875	.407340	-1.83
24	-61.67	10190.	102	0.	0	162.578	.427290	.386498	-1.81
25	-70.00	11795.	106	0.	0	136.463	.400516	.364961	-1.77
26	-78.33	11551.	108	0.	0	136.463	.369013	.338745	-1.74
27	-86.67	11173.	109	0.	0	136.463	.338423	.312195	-1.71
28	-95.00	10400.	112	0.	0	136.463	.308388	.285612	-1.58
29	-103.33	9658.	114	0.	0	136.463	.278628	.259776	-1.41
30	-111.67	8934.	118	0.	0	136.463	.248857	.230794	-1.24
31	-120.00	13671.	123	0.	0	43.056	.214549	.210714	-1.01
32	-130.00	12207.	123	0.	0	43.056	.168282	.166026	-1.59
33	-140.00	10163.	120	0.	0	43.056	.124952	.120945	-1.16

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION == VULCAN OGD HAMMER

OTIPS, 10, MINIMUM WALL THICKNESS=.75 IN. HUI = 35

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS/FT.	RESISTANCE DYNAMIC PT	MAX C STRESS	SFG	MAX T STRESS	SEC
TOTAL-TONS FORCE-TONS	LBS/SQ.IN. NO.	LBS/SQ.IN. NO.			
2.91	50	48.98	11702.	8883.	12
4.43	100	92.92	12090.	8988.	11
6.72	150	132.58	12094.	5599.	10
9.71	200	168.42	12097.	4369.	10
12.77	250	200.40	12100.	3276.	9
16.85	300	230.10	12103.	2303.	9
19.01	350	256.67	12106.	1448.	8
21.51	400	280.43	12108.	353.	19
24.04	450	302.44	12111.	0.	33
27.93	500	322.48	12114.	0.	33
32.13	550	340.96	12532.	0.	33
37.26	600	357.18	12978.	0.	33
43.65	650	371.39	13348.	0.	33
51.76	700	383.52	13640.	0.	33
62.32	750	393.41	13800.	0.	33
76.52	800	401.49	13971.	0.	33
96.50	850	408.02	14041.	0.	33
126.36	900	413.66	14076.	0.	33
174.81	950	418.15	14064.	0.	33
264.71	1000	420.31	13941.	0.	33
480.92	1050	422.06	13671.	0.	33

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

GTIP=10, MINIMUM WALL THICKNESS=.75 IN. RU = 35

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS PER FOOT	RESISTANCE TONS
126.36	900.
194.33	964.
244.71	1000.
247.55	1000.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACUM 3-PILE STRUCTURE -- HURRING 1
 APRIL 19 1976

PROB
 3

36-IN. DIAMETER PILES 3-PILE STRUCTURE
 150FT PENETRATION -- VULCAN 040 HAMMER
 OTIPS=30. MINIMUM WALL THICKNESS=.75 IN. RU = 50

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED BLOW COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
RPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (RPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF FRICTION	SPRING CONSTANT (LR / IN)
1	1000.00	40000.00	1.00	.60	2700000.00
2	1000.00	27000.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TON)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	20000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 4
 NUMBER OF SECTIONS CHANGED 1

NUMBER OF SECTIONS CHANGED 0
 NUMBER OF SECTIONS ADDED 0
 LENGTH OF PILE STAINING PILE(FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	50.	190	240
4	1	.750	50.	240	290

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SIDE DAMPENING RESISTANCE - JSIDE .15
 POINT DAMPENING RESISTANCE - JPOINT .15
 SOIL SHAKE FOR SIDE - QSIDE .10
 SOIL SHAKE FOR POINT - QPOINT .30

TIP RESISTANCE
 PERCENTAGE

50.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

NUMBER OF SECTIONS CHANGED
 NUMBER OF SECTIONS ADDED
 LENGTH OF FREE STANDING PILE(FT)

0 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	50.	190	240
4	1	.750	30.	240	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SIDE DAMPENING RESISTANCE - JSIDE .15
 POINT DAMPENING RESISTANCE - JPONT .15
 SOIL QUAKE FOR SIDE .10
 SOIL QUAKE FOR POINT .30

TIP RESISTANCE
 PERCENTAGE

50.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB

150FT PENETRATION == 36-IN. DIAMETER PILES 3-PILE STRUCTURE
VULCAN ODN HAMMER

OTTPa, 30, MINIMUM WALL THICKNESS=.75 IN. MU = 50

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	COEF RSTITU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	3869.62	136.46	1.00	39574342.
25	-70.00	0.00	3869.62	136.46	1.00	39574342.
26	-78.33	0.00	3869.62	136.46	1.00	39574342.
27	-86.67	0.00	3869.62	136.46	1.00	39574342.
28	-95.00	0.00	3869.62	136.46	1.00	39574342.
29	-103.33	0.00	3869.62	136.46	1.00	39574342.
30	-111.67	0.00	3869.62	136.46	1.00	39574342.
31	-120.00	0.00	2826.21	83.06	1.00	20071879.
32	-130.00	0.00	2826.21	83.06	1.00	20071879.
33	-140.00	1000.00	2826.21	83.06	1.00	20071879.

PROB 3 30-IN. DIAMETER PILES 3-PILE STRUCTURE
150-T PENETRATION -- VULCAN 000 HAMMER

QTIP: 30, MINIMUM WALL THICKNESS: .75 IN. MU = 50

TABLE A -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 50.00
PERMANENT SPT OF PILE = .0321 INCHES
NUMBER OF BLOWS PER FOOT = 373.31
TOTAL INTERVALS = 140

SEC	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	QMAX(M) IN.	D(M) IN.	V(M) FT/SFC
1	0.00	1781868.	34	0.	R1	1.000	1.204296	1.198202	-0.03
2	0.00	1481874.	45	0.	0	1.000	.792178	.757744	-0.11
3	120.00	10887.	47	0.	0	136.463	.778429	.742907	-0.15
4	111.00	10926.	50	0.	0	136.463	.770316	.734703	-0.19
5	102.00	11004.	53	0.	0	136.463	.761851	.726570	-0.24
6	93.00	11160.	56	0.	0	136.463	.753274	.718625	-0.30
7	84.00	11341.	58	0.	0	136.463	.740813	.710900	-0.35
8	75.00	11535.	61	0.	0	136.463	.736684	.703425	-0.42
9	66.00	11713.	63	0.	0	136.463	.728838	.696071	-0.48
10	57.00	11878.	66	0.	0	136.463	.720722	.688699	-0.54
11	48.00	12014.	68	0.	0	136.463	.712020	.681221	-0.60
12	39.00	12119.	70	0.	0	136.463	.702630	.673575	-0.66
13	30.00	10248.	73	0.	0	162.578	.692528	.665626	-0.74
14	21.67	10344.	75	0.	0	162.578	.684165	.658099	-0.81
15	13.33	10467.	78	0.	0	162.578	.675058	.651804	-0.89
16	5.00	10589.	80	0.	0	162.578	.666471	.643886	-0.97
17	-3.33	10661.	82	0.	0	162.578	.658982	.635128	-1.03
18	-11.67	10674.	85	0.	0	162.578	.648975	.625606	-1.06
19	-20.00	10660.	87	0.	0	162.578	.636341	.615553	-1.04
20	-28.33	10624.	90	0.	0	162.578	.624882	.605035	-1.04
21	-36.67	10531.	92	0.	0	162.578	.612465	.593864	-1.07
22	-45.00	10347.	95	0.	0	162.578	.598959	.581892	-1.13
23	-53.33	10064.	98	0.	0	162.578	.584568	.568925	-1.20
24	-61.67	9722.	99	0.	0	162.578	.569833	.554682	-1.29
25	-70.00	11123.	101	0.	0	136.463	.554514	.539199	-1.33
26	-78.33	10573.	104	0.	0	136.463	.535574	.519495	-1.37
27	-86.67	10033.	107	0.	0	136.463	.515504	.499735	-1.40
28	-95.00	9661.	111	0.	0	136.463	.494100	.478717	-1.37
29	-103.33	9163.	112	0.	0	136.463	.471344	.457166	-1.26
30	-111.67	8619.	116	0.	0	136.463	.447315	.435561	-1.11
31	-120.00	15495.	122	0.	0	43.056	.422142	.414109	-0.94
32	-130.00	13202.	125	0.	0	43.056	.374954	.372811	-0.60
33	-140.00	12524.	126	0.	0	43.056	.332145	.332117	-0.18

PROB 150FT PENETRATION -- 14-IN. DIAMETER PILLS 1-PTIE STRUCTURE
 150FT PENETRATION -- VULCAN 000 HAMMER

OTID=30, MINIMUM WALL THICKNESS=.75 IN. RD = 50

TABLE 9 -- RESISTANCE-DEFORMATION CURVE DATA

TIP RESISTANCE PERCENTAGE = 50.00					
BLD#S/FT.	RESISTANCE DYNAMIC PT	MAX C STRFSS	SEG	MAX T STRFSS	SEG
	TOTAL-TONS FORCE-TONS	LBS/SQ.IN. NO.	LBS/SQ.IN. NO.	LBS/SQ.IN. NO.	
2.83	50	69.84	12	4388.	12
4.56	100	152.29	12	6850.	11
7.29	150	188.76	12	5380.	10
10.87	200	239.33	12	4074.	10
15.07	250	284.07	12	2874.	10
21.32	300	325.63	12	1837.	6
25.03	350	358.55	12	1310.	6
29.59	400	389.65	12	908.	5
35.33	450	417.45	31	214.	12
42.77	500	441.95	31	0.	33
52.73	550	462.92	31	0.	33
66.79	600	480.45	31	0.	33
87.93	650	499.22	31	0.	33
122.85	700	513.92	31	0.	33
190.74	750	524.18	31	0.	33
373.31	800	520.10	31	0.	33

PROB 3 36-IN. DIAMETER PILES 3-PIE STRUCTURE
 150FT PENETRATION -- VULCAN ODD HAMMER

Q-TYPE, 30, MINIMUM WALL THICKNESS=.75 IN. WLL = 50

TABLE 10 -- SPECIFIED ALLOW DATA

TIP RESISTANCE PERCENTAGE = 50.00

ALLOW PER FOOT	RESISTANCE TONS
144.02	720.
190.74	750.
228.72	766.
294.68	785.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACMM 3-PILE STRUCTURE -- BORING 1
 APRIL 19 1976

PROB
 4

36-IN. DIAMETER PILES 3-PILE STRUCTURE
 150FT PENETRATION -- VULCAN 040 HAMMER
 OTYPE, 025, MINIMUM MAIL THICKNESS 1.25 IN. RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED ALLOW COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
HPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX ALLOWS FOR RESISTANCE=ALLOW CURVE (HPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	=0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	=0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2700000.00
2	1000.00	27000.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TUN)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 3
 NUMBER OF SECTIONS CHANGED 0

NUMBER OF SECTIONS ALLOWED 120.00
 12.00 M OFF STANDING PILE(FT)

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	40.	190	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SIDE DAMPING RESISTANCE - JSIDE .15
 POINT DAMPING RESISTANCE - JPOINT .15
 SOIL SHAKE FOR SIDE - JSIDE .10
 SOIL SHAKE FOR POINT - JPOINT .03

TIP RESISTANCE
 PERCENTAGE

10,000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB

150FT PENETRATION -- 36-IN. DIAMETER PILES 3-PILE STRUCTURE
-- VULCAN O-10 HAMMER

OTTP=0.025, MINIMUM WALL THICKNESS=1.25 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	PLEV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	CORR RSTYTH	SPR STIFF LRS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.54	1.00	47147562.
14	21.67	0.00	4610.13	162.54	1.00	47147562.
15	13.33	0.00	4610.13	162.54	1.00	47147562.
16	5.00	0.00	4610.13	162.54	1.00	47147562.
17	-3.33	0.00	4610.13	162.54	1.00	47147562.
18	-11.67	0.00	4610.13	162.54	1.00	47147562.
19	-20.00	0.00	4610.13	162.54	1.00	47147562.
20	-28.33	0.00	4610.13	162.54	1.00	47147562.
21	-36.67	0.00	4610.13	162.54	1.00	47147562.
22	-45.00	0.00	4610.13	162.54	1.00	47147562.
23	-53.33	0.00	4610.13	162.54	1.00	47147562.
24	-61.67	0.00	4610.13	162.54	1.00	47147562.
25	-70.00	0.00	4127.59	136.46	1.00	37100946.
26	-78.33	0.00	4127.59	136.46	1.00	37100946.
27	-86.67	0.00	4127.59	136.46	1.00	37100946.
28	-95.00	0.00	4127.59	136.46	1.00	37100946.
29	-103.33	0.00	4127.59	136.46	1.00	37100946.
30	-111.67	0.00	4127.59	136.46	1.00	37100946.
31	-120.00	0.00	4127.59	136.46	1.00	37100946.
32	-128.33	0.00	4127.59	136.46	1.00	37100946.
33	-136.67	1000.00	4127.59	136.46	1.00	37100946.

PROB 150FT PENETRATION 36-IN. DIAMETER PILES 3-PILE STRUCTURE
 150FT PENETRATION -- VULCAN 000 HAMMER

QTIPS, 0.25-IN. MINIMUM WALL THICKNESS = 1.25 IN. WU = 14

TABLE A -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0409 INCHES
 NUMBER OF BLOWS PER FOOT = 293.70
 TOTAL INTERVALS = 118

SEC	ELEV FT	MAX C STRESS LBS/SQ. IN.	TIME N	MAX T STRESS LBS/SQ. IN.	TIME N	AREA SQ. IN.	D MAX (M) IN.	D (M) IN.	V (M) FT/SEC
1	0.00	1782025.	31	0.	74	1.000	1.168976	1.168919	-1.21
2	0.00	1481205.	40	0.	0	1.000	.759061	.700713	-1.00
3	120.00	10887.	43	0.	0	136.463	.745125	.680878	-1.18
4	111.00	10925.	45	0.	0	136.463	.736565	.666758	-1.15
5	102.00	11002.	48	0.	0	136.463	.727178	.651949	-1.53
6	93.00	11159.	50	0.	0	136.463	.716851	.636415	-1.70
7	84.00	11339.	53	0.	0	136.463	.705545	.620140	-1.85
8	75.00	11535.	55	0.	0	136.463	.693147	.603197	-1.99
9	66.00	11715.	57	0.	0	136.463	.679523	.585552	-2.13
10	57.00	11881.	59	0.	0	136.463	.664533	.567160	-2.28
11	48.00	12037.	62	0.	0	136.463	.647994	.547895	-2.40
12	39.00	12191.	64	0.	0	136.463	.629681	.527790	-2.50
13	30.00	10388.	67	0.	0	162.578	.609244	.508820	-2.54
14	21.67	10624.	69	0.	0	162.578	.591290	.489635	-2.65
15	13.33	10821.	72	0.	0	162.578	.571330	.471581	-2.69
16	5.00	11260.	74	0.	0	162.578	.549250	.452592	-2.72
17	-3.33	11536.	76	0.	0	162.578	.525099	.432462	-2.74
18	-11.67	11710.	79	0.	0	162.578	.499191	.411198	-2.71
19	-20.00	11796.	81	0.	0	162.578	.471655	.388887	-2.66
20	-28.33	11782.	84	0.	0	162.578	.442871	.365427	-2.54
21	-36.67	11620.	85	0.	0	162.578	.413036	.341272	-2.36
22	-45.00	11341.	88	0.	0	162.578	.382400	.316762	-2.21
23	-53.33	10970.	90	0.	0	162.578	.350978	.291889	-2.02
24	-61.67	10567.	93	0.	0	162.578	.318802	.267114	-1.84
25	-70.00	11996.	96	0.	0	136.463	.285962	.242554	-1.64
26	-78.89	11483.	100	0.	0	136.463	.245032	.212483	-1.40
27	-87.78	10690.	101	0.	0	136.463	.206255	.184065	-1.21
28	-96.67	9579.	102	0.	0	136.463	.170950	.157629	-1.05
29	-105.56	8254.	103	0.	0	136.463	.140442	.133550	-.85
30	-114.44	6750.	104	0.	0	136.463	.115247	.111757	-.64
31	-123.33	5289.	104	0.	0	136.463	.094583	.093242	-.43
32	-132.22	4012.	107	0.	0	136.463	.078492	.078078	-.29
33	-141.11	3000.	106	0.	0	136.463	.065858	.065834	-.14

PR08

4 36-IN. DIAMETER PILES (4-PIE STRUCTURE)
150FT PENETRATION -- VULCAN 040 HAMMER

OTIPS, 0.25, MINIMUM WALL THICKNESS 1.25 IN. HUI = 14

TABLE 9 -- RESISTANCE-MULUM CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00					
HL08/FT.	RESISTANCE DYNAMIC PT	MAX C STRESS	SFG	MAX T STRESS	SFG
	TOTAL-TONS FORCE-TONS	LBS/SQ. IN. (NO.)	LBS/SQ. IN. (NO.)		
2.87	50.	19.50	1168A.	12	9012.
4.28	100.	36.77	1205A.	12	7487.
6.31	150.	52.61	12095.	12	6255.
8.99	200.	66.97	12099.	12	5193.
11.41	250.	80.01	12104.	12	4200.
15.09	300.	91.88	12108.	12	3429.
16.73	350.	102.68	12112.	12	2682.
18.57	400.	112.51	12117.	12	1454.
20.65	450.	121.45	12121.	12	715.
23.02	500.	129.60	12125.	12	27.
25.74	550.	137.00	12129.	12	0.
28.49	600.	143.71	12133.	12	0.
32.57	650.	149.75	12137.	12	0.
36.91	700.	155.25	12142.	12	0.
42.08	750.	160.15	12146.	12	0.
48.30	800.	164.41	12150.	12	0.
55.91	850.	168.19	12154.	12	0.
65.34	900.	171.65	12158.	12	0.
77.16	950.	174.54	12162.	12	0.
92.13	1000.	176.71	12166.	12	0.
111.25	1050.	179.33	12170.	12	0.
135.59	1100.	184.52	12174.	12	0.
164.93	1150.	190.14	12179.	12	0.
199.16	1200.	195.90	12183.	12	0.
240.58	1250.	201.72	12187.	12	0.
293.70	1300.	207.45	12191.	12	0.
365.08	1350.	212.75	12195.	12	0.

PROB 4 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTYPE, 025, MINIMUM WALL THICKNESS 1.25 IN. PU = 14

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLows PER FOOT	RESISTANCE TONS
135.59	1100.
199.14	1200.
240.54	1250.
293.70	1300.

NAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACME 5-PILE STRUCTURE -- RUNNING 1
 APRIL 19 1976

PROB 5
 36-IN. DIAMETER PILES 3-PILE STRUCTURE
 150FT PENETRATION -- VULCAN 040 HAMMER MU = 35
 OTYPE 10 MINIMUM WALL THICKNESS 1.25 IN.

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED PLUM COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
HPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX ALLOWS FOR RESISTANCE-HLON CURVE (RPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	40.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	40.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LBS)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LBS / IN)
1	1000.00	40000.00	1.00	.60	2700000.00
2	1000.00	27000.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1			
MATERIAL TYPE	(TON)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	20000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 1

NUMBER OF SECTIONS ADDED
 LENGTH OF FREE STANDING PILE (FT)

SECTION NUMBER	MATERIAL TYPE	PILE THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOT
1	1	1.250	90.	0	90
2	1	1.500	100.	90	190
3	1	1.250	40.	190	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SIDE DAMPING RESISTANCE - JSIDE .15
 POINT DAMPING RESISTANCE - JPOINT .15
 SOIL SHAKE FOR SIDE - JSIDE .10
 SOIL SHAKE FOR POINT - JPOINT .10

TIP RESISTANCE PERCENTAGE

35.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB

5 34-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIPS, 10, MINIMUM WALL THICKNESS=1.25 IN. MU = 35

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	COEF RSTT	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.60	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4127.59	136.46	1.00	37100946.
26	-78.33	0.00	4127.59	136.46	1.00	37100946.
27	-86.67	0.00	4127.59	136.46	1.00	37100946.
28	-95.00	0.00	4127.59	136.46	1.00	37100946.
29	-103.33	0.00	4127.59	136.46	1.00	37100946.
30	-111.67	0.00	4127.59	136.46	1.00	37100946.
31	-120.00	0.00	4127.59	136.46	1.00	37100946.
32	-128.33	0.00	4127.59	136.46	1.00	37100946.
33	-136.67	1000.00	4127.59	136.46	1.00	37100946.

PROB 5 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN ORO HAMMER

QTIP=10, MINIMUM WALL THICKNESS=1.25 IN. RU = 45

TABLE A -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 35.00

PERMANENT SET OF PILE = .0272 INCHES

NUMBER OF BLOWS PER FOOT = 440.70

TOTAL INTERVALS = 122

SEC	ELEV FT	MAX C STRESS LBS/SQ. IN.	TIME N	MAX T STRESS LBS/SQ. IN.	TIME N	AREA SQ. IN.	DMAX (M) IN.	D (M) IN.	V (M) FT/SEC
1	0.00	1782025.	31	0.	74	1.000	1.180319	1.177411	-1.34
2	0.00	1441205.	40	0.	0	1.000	.768810	.718445	-1.60
3	120.00	10887.	43	0.	0	136.443	.754977	.740732	-1.72
4	111.00	10925.	45	0.	0	136.443	.746664	.649152	-1.86
5	102.00	11002.	48	0.	0	136.443	.737731	.677227	-1.99
6	93.00	11159.	50	0.	0	136.443	.728234	.644977	-1.12
7	84.00	11339.	53	0.	0	136.443	.718236	.652587	-1.26
8	75.00	11535.	55	0.	0	136.443	.707893	.639304	-1.34
9	66.00	11714.	57	0.	0	136.443	.696564	.625676	-1.53
10	57.00	11878.	59	0.	0	136.443	.684708	.611457	-1.64
11	48.00	12023.	62	0.	0	136.443	.671729	.596672	-1.76
12	39.00	12151.	64	0.	0	136.443	.657402	.581227	-1.86
13	30.00	10309.	66	0.	0	162.578	.641575	.565053	-1.96
14	21.67	10465.	69	0.	0	162.578	.627816	.551805	-2.04
15	13.33	10666.	71	0.	0	162.578	.612567	.537617	-2.14
16	5.00	10885.	73	0.	0	162.578	.595468	.522314	-2.24
17	-3.33	11052.	75	0.	0	162.578	.577622	.505764	-2.34
18	-11.67	11138.	78	0.	0	162.578	.557810	.487899	-2.40
19	-20.00	11180.	80	0.	0	162.578	.538723	.468425	-2.40
20	-28.33	11159.	82	0.	0	162.578	.518496	.448767	-2.37
21	-36.67	11058.	84	0.	0	162.578	.491401	.427915	-2.29
22	-45.00	10885.	87	0.	0	162.578	.467308	.406415	-2.19
23	-53.33	10659.	89	0.	0	162.578	.441804	.382375	-2.07
24	-61.67	10391.	92	0.	0	162.578	.418424	.361095	-1.96
25	-70.00	11913.	94	0.	0	136.443	.386242	.339268	-1.86
26	-78.89	11518.	99	0.	0	136.443	.349000	.310123	-1.75
27	-87.78	11373.	101	0.	0	136.443	.311871	.280753	-1.65
28	-96.67	11008.	103	0.	0	136.443	.275980	.251737	-1.43
29	-105.56	10321.	105	0.	0	136.443	.241657	.224084	-1.20
30	-114.44	9517.	105	0.	0	136.443	.208327	.197880	-1.06
31	-123.33	8749.	111	0.	0	136.443	.177245	.172822	-1.06
32	-132.22	7012.	110	0.	0	136.443	.150865	.149102	-1.48
33	-141.11	6545.	108	0.	0	136.443	.127229	.126893	-1.28

PROB 5 36-IN. DIAMETER PILLS TOILE STRUCTURE
150FT PENETRATION -- VULCAN ODO MACHIN

QTYPE, 10-MINIMUM WALL THICKNESSES, 25 IN. RU = 35

TABLE 9 -- RESISTANCE-MLIN CURVE DA

BLINDS/FT.	TIP RESISTANCE PERCENTAGE	MAX C STRESS LBS/SQ. IN. MIN.	SEG	MAX T STRESS LBS/SQ. IN. MIN.	SEG
2.85	50	11673.	12	4781.	25
4.35	100	12087.	12	7342.	11
6.57	150	12091.	12	6015.	10
9.54	200	12094.	12	4817.	9
12.42	250	12097.	12	3742.	9
16.45	300	12101.	12	2910.	8
18.49	350	12104.	12	2225.	7
20.84	400	12107.	12	826.	21
23.55	450	12110.	12	92.	22
26.73	500	12113.	12	0.	33
30.50	550	12117.	12	0.	33
35.04	600	12120.	12	0.	33
40.57	650	12123.	12	0.	33
47.44	700	12126.	12	0.	33
56.14	750	12129.	12	0.	33
67.39	800	12132.	12	0.	33
82.43	850	12136.	12	0.	33
103.30	900	12139.	12	0.	33
133.92	950	12142.	12	0.	33
181.88	1000	12145.	12	0.	33
265.65	1050	12148.	12	0.	33
440.70	1100	12151.	12	0.	33

PROB 5 30-IN. DIAMETER PILES 3-PILE STRUCTURE
 150FT PENETRATION -- VULCAN OIL WAREHOUSE

OTYPE 10, MINIMUM WALL THICKNESS 1.25 IN. RII = 35

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS PER FOOT	RESISTANCE TONS
133.92	9504
141.88	10004
265.65	10504
289.81	10604

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACHR 3-PILE STRUCTURE -- HONOLULU 1
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36-IN. DIAMETER PILES 3-PILE STRUCTURE
 150FT PENETRATION -- VULCAN 040 HAMMER
 OTTP= .30, MINIMUM WALL THICKNESS=1.25 IN. HU = 50

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED RUM COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
RPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX FLOWS FOR RESISTANCE-HLOW CURVE (RPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TON)	UNIT WT. (PCF)	MODULUS (PSI)
1	16.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS	1
NUMBER OF SECTIONS CHANGED	0

NUMBER OF SECTIONS CHANGED
 NUMBER OF SECTIONS ADDED
 LENGTH OF FREE STANDING PILE (FT)

0
 0
 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP BOTTOM
1	1	1.250	90.	0 90
2	1	1.500	100.	90 190
3	1	1.250	100.	190 270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SIDE DAMPENING RESISTANCE - JSIDE .15
 POINT DAMPENING RESISTANCE - JPOINT .15
 SOIL QUAKE FOR SIDE .0SIDE .10
 SOIL QUAKE FOR POINT .0POINT .30

TIP RESISTANCE
 PERCENTAGE

50.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PFH FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PRUB

150FT PENETRATION -- 3/4-IN. DIAMETER PILES 3-PILE STRUCTURE
-- VULCAN OIL HAMMER

UTIPR-30, MINIMUM WALL THICKNESS 1.25 IN. RII = 50

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	COEF RSTTU	SPR STIFF LRS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	36642910.
3	120.00	0.00	4179.19	136.46	1.00	36642910.
4	111.00	0.00	4179.19	136.46	1.00	36642910.
5	102.00	0.00	4179.19	136.46	1.00	36642910.
6	93.00	0.00	4179.19	136.46	1.00	36642910.
7	84.00	0.00	4179.19	136.46	1.00	36642910.
8	75.00	0.00	4179.19	136.46	1.00	36642910.
9	66.00	0.00	4179.19	136.46	1.00	36642910.
10	57.00	0.00	4179.19	136.46	1.00	36642910.
11	48.00	0.00	4179.19	136.46	1.00	36642910.
12	39.00	0.00	4179.19	136.46	1.00	36642910.
13	30.00	0.00	4610.13	162.54	1.00	47147562.
14	21.67	0.00	4610.13	162.54	1.00	47147562.
15	13.33	0.00	4610.13	162.54	1.00	47147562.
16	5.00	0.00	4610.13	162.54	1.00	47147562.
17	-3.33	0.00	4610.13	162.54	1.00	47147562.
18	-11.67	0.00	4610.13	162.54	1.00	47147562.
19	-20.00	0.00	4610.13	162.54	1.00	47147562.
20	-28.33	0.00	4610.13	162.54	1.00	47147562.
21	-36.67	0.00	4610.13	162.54	1.00	47147562.
22	-45.00	0.00	4610.13	162.54	1.00	47147562.
23	-53.33	0.00	4610.13	162.54	1.00	47147562.
24	-61.67	0.00	4610.13	162.54	1.00	47147562.
25	-70.00	0.00	4127.59	136.46	1.00	37100946.
26	-78.49	0.00	4127.59	136.46	1.00	37100946.
27	-87.74	0.00	4127.59	136.46	1.00	37100946.
28	-96.67	0.00	4127.59	136.46	1.00	37100946.
29	-105.56	0.00	4127.59	136.46	1.00	37100946.
30	-114.44	0.00	4127.59	136.46	1.00	37100946.
31	-123.33	0.00	4127.59	136.46	1.00	37100946.
32	-132.22	0.00	4127.59	136.46	1.00	37100946.
33	-141.11	1000.00	4127.59	136.46	1.00	37100946.

30-IN. DIAMETER PILLS 3-PIE STRUCTURE
150FT PENETRATION -- VULCAN OIL HAMMER

QTIP=30, MINIMUM WALL THICKNESS=1.25 IN. WID = 50

TABLE A -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 50.00

PERMANENT SET OF PILE = .0310 INCHES
NUMBER OF BLOWS PER FOOT = 187.07
TOTAL INTERVALS = 127

SEG	ELEV FT	MAX C STRESS LBS/SQ.IN.	TIME N	MAX T STRESS LBS/SQ.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1782025.	51	0.	74	1.000	1.200649	1.193692	0.47
2	0.00	1481205.	40	0.	0	1.000	.784990	.751702	0.17
3	120.00	10487.	43	0.	0	136.443	.774733	.736381	0.23
4	111.00	10925.	45	0.	0	136.443	.766508	.727523	0.30
5	102.00	11002.	48	0.	0	136.443	.758089	.718477	0.39
6	93.00	11159.	50	0.	0	136.443	.749441	.709262	0.51
7	84.00	11339.	53	0.	0	136.443	.740801	.699472	0.62
8	75.00	11534.	55	0.	0	136.443	.732362	.690351	0.72
9	66.00	11714.	57	0.	0	136.443	.724127	.680735	0.80
10	57.00	11876.	59	0.	0	136.443	.715605	.671018	0.86
11	48.00	12012.	62	0.	0	136.443	.706520	.661316	0.90
12	39.00	12122.	64	0.	0	136.443	.696657	.651619	0.93
13	30.00	12253.	66	0.	0	162.578	.685925	.641809	1.00
14	21.67	10356.	68	0.	0	162.578	.676705	.633780	1.09
15	13.33	10480.	70	0.	0	162.578	.666453	.625063	1.22
16	5.00	10612.	72	0.	0	162.578	.655117	.615441	1.33
17	-3.33	10697.	74	0.	0	162.578	.642765	.604845	1.41
18	-11.67	10714.	77	0.	0	162.578	.629615	.593424	1.44
19	-20.00	10703.	79	0.	0	162.578	.616204	.581452	1.42
20	-28.33	10656.	81	0.	0	162.578	.602695	.569074	1.37
21	-36.67	10568.	84	0.	0	162.578	.588441	.556353	1.31
22	-45.00	10445.	86	0.	0	162.578	.572842	.543321	1.24
23	-53.33	10300.	88	0.	0	162.578	.555894	.529781	1.24
24	-61.67	10116.	90	0.	0	162.578	.537917	.515422	1.30
25	-70.00	11672.	92	0.	0	136.443	.519651	.500183	1.30
26	-78.89	11446.	93	0.	0	136.443	.497122	.480215	1.27
27	-87.78	10473.	99	0.	0	136.443	.474821	.459753	1.24
28	-96.67	10269.	101	0.	0	136.443	.451567	.438516	1.20
29	-105.56	9848.	103	0.	0	136.443	.427771	.414887	1.06
30	-114.44	9219.	103	0.	0	136.443	.403262	.395372	0.89
31	-123.33	8723.	110	0.	0	136.443	.378292	.373979	0.74
32	-132.22	8441.	113	0.	0	136.443	.354322	.352411	0.54
33	-141.11	8195.	115	0.	0	136.443	.331002	.330509	0.37

PROB

150FT PENETRATION -- 54-IN. DIAMETER PILES 3-PTIF STRUCTURE
VULCAN OGD HAMMER

QTTP, 30, MINIMUM WALL THICKNESS 1.25 IN. RUI = 50

TABLE 9 -- RESISTANCE-HL/IN CURVE DATA

TTP RESISTANCE PERCENTAGE = 50.00					
HL/IN/FT.	RESISTANCE DYNAMIC PT	MAX C STRESS	SFC	MAX T STRESS	SEG
TOTAL-TONS	FORCE-TONS	LBS/SQ. IN. NO.	LBS/SQ. IN. NO.		
2.77	50	11654.	12	8625.	25
4.47	100	12045.	12	7226.	11
7.14	150	12088.	12	5823.	10
10.69	200	12090.	12	4545.	10
14.70	250	12093.	12	3465.	9
20.57	300	12095.	12	2481.	9
25.97	350	12098.	12	1583.	9
28.07	400	12100.	12	547.	20
33.15	450	12103.	12	0.	33
39.50	500	12105.	12	0.	33
47.73	550	12108.	12	0.	33
58.76	600	12110.	12	0.	33
74.21	650	12113.	12	0.	33
97.25	700	12115.	12	0.	33
134.89	750	12117.	12	0.	33
206.20	800	12120.	12	0.	33
387.07	850	12122.	12	0.	33

PROB 6 34-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIPS, 30, MINIMUM WALL THICKNESS=1.25 IN. RU = 50

TABLE 10 -- SPECIFIED H/L/W DATA

TIP RESISTANCE PERCENTAGE = 50.00

BLows PER FOOT	RESISTANCE TONS
134.89	750.
204.20	800.
234.20	812.
294.35	831.

JYJZGR. 04/19/74. *UNITED COMPUTING* 67. APFX/SL. 4.0.24

17.52.05PIL,C4100,71000.				
17.52.05PIL	44	0.000		
17.52.06SAC34000CRR0023,2777100CC)R				
17.52.06. 04/19/74.JYJZGR				
17.52.06.WFL,40000.		0.001		
17.52.06PIL 3392		0.001		
17.52.06PIL 16384				
17.52.06.WAP,0FF.				
17.52.06PIL 246		0.001		
17.52.06PIL,GET,PILR(CAR0024)				
17.52.10.WEANY - PILR				
17.52.10PIL 4096		0.001	0	0.
17.52.10PIL 72				
17.52.10PILR.				
17.52.10PIL00 16384		0.002		
17.52.12PIL01 16384		0.101	190	7
17.52.12.PL REQUITREN TO LOAD			363708	(15608)
17.52.12.PL REQUITREN TO EXECUTE			340004	(14336)
17.52.12PIL 16384		0.145		
17.53.10END PIL041				
17.53.10.COST.				
17.53.10PIL 14336		39.007	158	11
17.53.10PIL		SERVICE UNITS	104.6	
17.53.11.		JOB COSTS	24.15	
17.53.11PIL 12288			7	5
17.53.11.EXIT.				
17.53.11SUT00 2368		39.030		
17.53.11.		*PL* *CPU SFC. *DISC PRUS* DISC ACC		
17.53.11.P.F. PRUS.P.F. ACC *TAPE PRUS* TAPE ACC				

Pile Driving Resistance Curves

Pile Diameter	- 36 in.
Minimum Wall Thickness	- 1.5 in.
Penetration	- 200 ft. - 150 ft.
Hammer	- Vulcan 040
Quake Factor, tip	- .025 in.

• UNITED COMPUTING* 67. APX/SL. B.0.24

15.50.58. 04/20/76.

04/20/76.

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WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACHR 3-PILE STRUCTURE -- HIRING 1
 APRIL 19 1976

PROB 1
 36-IN. DIAMETER PILES 3-PILE STRUCTURE
 200FT PENETRATION -- VULCAN 040 HAMMER
 OTIPS.025, MINIMUM WALL THICKNESS 1.5 IN. RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA (OPTION)	1
NEW MATERIAL DATA (OPTION)	1
NEW PILE SECTION DATA (OPTION)	1
NEW SOIL DATA (OPTION)	1
SPECIFIED BLOW COUNT (OPTION)	1
OUTPUT OPTION FOR STRESS	1
BPF FOR STRESS OUTPUT (OPTION)	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (RBP)	300.
SPECIFIED SEGMENT LENGTH (FT)	=0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 040 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	=0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	40000.00	1.00	.60	2700000.00
2	1000.00	27000.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TON)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	290000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 4

NUMBER OF TYP SECTIONS CHANGED
 NUMBER OF SECTIONS ADDED
 LENGTH OF FREE STANDING PILE (FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	HEIGHT (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	40.	0	40
2	1	1.750	100.	40	140
3	1	1.500	100.	140	240
4	1	1.500	40.	240	320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SIDE DAMPENING RESISTANCE - JSIDE .15
 POINT DAMPENING RESISTANCE - JPOINT .15
 SOIL SHAKE FOR SIDE - OSIDE .10
 SOIL SHAKE FOR POINT - OPOINT .03

TIP RESISTANCE
 PERCENTAGE

14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN ODU HAMMER

QTY=0.025, MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WFGHT LBS	AREA SQ. IN.	CNCF PSTTU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2780000.
2	0.00	1000.00	27800.00	1.00	.90	32978619.
3	120.00	0.00	4643.54	136.46	1.00	32978619.
4	110.00	0.00	4643.54	136.46	1.00	32978619.
5	100.00	0.00	4643.54	136.46	1.00	32978619.
6	90.00	0.00	4643.54	136.46	1.00	32978619.
7	80.00	0.00	5339.52	188.30	1.00	54604898.
8	71.67	0.00	5339.52	188.30	1.00	54604898.
9	63.33	0.00	5339.52	188.30	1.00	54604898.
10	55.00	0.00	5339.52	188.30	1.00	54604898.
11	46.67	0.00	5339.52	188.30	1.00	54604898.
12	38.33	0.00	5339.52	188.30	1.00	54604898.
13	30.00	0.00	5339.52	188.30	1.00	54604898.
14	21.67	0.00	5339.52	188.30	1.00	54604898.
15	13.33	0.00	5339.52	188.30	1.00	54604898.
16	5.00	0.00	5339.52	188.30	1.00	54604898.
17	-3.33	0.00	5339.52	188.30	1.00	54604898.
18	-11.67	0.00	5339.52	188.30	1.00	54604898.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4610.13	162.58	1.00	47147562.
26	-78.33	0.00	4610.13	162.58	1.00	47147562.
27	-86.67	0.00	4610.13	162.58	1.00	47147562.
28	-95.00	0.00	4610.13	162.58	1.00	47147562.
29	-103.33	0.00	4610.13	162.58	1.00	47147562.
30	-111.67	0.00	4610.13	162.58	1.00	47147562.
31	-120.00	0.00	4917.48	162.58	1.00	44200839.
32	-128.89	0.00	4917.48	162.58	1.00	44200839.
33	-137.78	0.00	4917.48	162.58	1.00	44200839.
34	-146.67	0.00	4917.48	162.58	1.00	44200839.
35	-155.56	0.00	4917.48	162.58	1.00	44200839.
36	-164.44	0.00	4917.48	162.58	1.00	44200839.
37	-173.33	0.00	4917.48	162.58	1.00	44200839.
38	-182.22	0.00	4917.48	162.58	1.00	44200839.
39	-191.11	1000.00	4917.48	162.58	1.00	44200839.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 040 HAMMER

OTTP=.025, MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0424 INCHES
NUMBER OF BLOWS PER FOOT = 282.97
TOTAL INTERVALS = 134

SEC	ELEV FT	MAX C STRESS LBS/SQ. IN.	TIME N	MAX T STRESS LRS/SQ. IN.	TIME N	AREA SQ. IN.	DWAX (M) IN.	D (M) IN.	V (M) FT/SEC
1	0.00	1779488.	32	0.	134	1.000	1.117019	.670291	-12.04
2	0.00	1624301.	43	0.	99	1.000	.690077	.652987	-1.14
3	120.00	12264.	46	237.	92	136.463	.669866	.632731	-1.23
4	110.00	12583.	48	348.	94	136.463	.659300	.617952	-1.34
5	100.00	12836.	50	330.	96	136.463	.654137	.601428	-1.45
6	90.00	13005.	52	206.	97	136.463	.652799	.583307	-1.55
7	80.00	9452.	54	0.	0	188.300	.652353	.563759	-1.65
8	71.67	9478.	56	0.	0	188.300	.651577	.551110	-1.71
9	63.33	9504.	59	0.	0	188.300	.649935	.537731	-1.77
10	55.00	9514.	61	0.	0	188.300	.647234	.523741	-1.83
11	46.67	9492.	63	0.	0	188.300	.643262	.509274	-1.90
12	38.33	9458.	65	0.	0	188.300	.637777	.494444	-1.96
13	30.00	9451.	67	0.	0	188.300	.630639	.479379	-2.02
14	21.67	9478.	70	0.	0	188.300	.621641	.464259	-2.09
15	13.33	9560.	72	0.	0	188.300	.610622	.449326	-2.17
16	5.00	9691.	75	0.	0	188.300	.597490	.434715	-2.23
17	-3.33	9840.	77	0.	0	188.300	.582189	.420330	-2.25
18	-11.67	9991.	80	0.	0	188.300	.564783	.405992	-2.23
19	-20.00	11679.	82	0.	0	162.578	.545450	.391639	-2.22
20	-28.33	11729.	85	0.	0	162.578	.521570	.375013	-2.23
21	-36.67	11727.	87	0.	0	162.578	.496397	.358359	-2.27
22	-45.00	11663.	89	0.	0	162.578	.470262	.341536	-2.31
23	-53.33	11541.	92	0.	0	162.578	.443288	.324544	-2.35
24	-61.67	11360.	94	0.	0	162.578	.415603	.306580	-2.37
25	-70.00	11118.	96	0.	0	162.578	.387686	.288179	-2.34
26	-78.33	10819.	99	0.	0	162.578	.359531	.269455	-2.28
27	-86.67	10474.	101	0.	0	162.578	.331565	.250550	-2.19
28	-95.00	10048.	103	0.	0	162.578	.303940	.231689	-2.04
29	-103.33	9577.	106	0.	0	162.578	.276608	.213162	-1.94
30	-111.67	8996.	109	0.	0	162.578	.249563	.194712	-1.80
31	-120.00	8468.	113	0.	0	162.578	.222412	.176872	-1.65
32	-128.89	8129.	115	0.	0	162.578	.193595	.158681	-1.45
33	-137.78	7706.	116	0.	0	162.578	.166297	.141771	-1.26
34	-146.67	7015.	116	0.	0	162.578	.141454	.125970	-1.05
35	-155.56	6101.	119	0.	0	162.578	.119638	.111460	-.86
36	-164.44	5213.	119	0.	0	162.578	.102238	.094270	-.64
37	-173.33	4240.	119	0.	0	162.578	.084306	.084716	-.46
38	-182.22	3152.	117	0.	0	162.578	.076004	.076004	-.32

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PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 000 MAMFED

QTIP=.025, MINIMUM WALL THICKNESS=1.5 IN. MU = 14

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE DYNAMIC PT	MAX C STRESS	SEG MAX T STRESS	SEG
	TOTAL-TONS FORCE-TONS	LRS/SQ.IN. NO.	(LRS/SQ.IN. NO.)	
2.74	50	18.69	12889.	30
4.12	100	35.91	12994.	29
5.89	150	51.74	13005.	29
8.04	200	62.26	13005.	30
10.45	250	79.61	13005.	30
12.84	300	91.89	13005.	30
15.60	350	103.17	13005.	30
18.03	400	113.55	13005.	30
19.83	450	123.06	13005.	31
21.86	500	131.79	13005.	31
24.16	550	139.76	13005.	31
26.79	600	147.04	13005.	32
29.82	650	153.66	13005.	32
33.34	700	159.63	13005.	5
37.47	750	165.03	13005.	5
42.35	800	169.92	13005.	5
48.20	850	174.22	13005.	5
55.27	900	176.03	13005.	5
63.96	950	181.51	13005.	5
74.74	1000	184.68	13005.	5
88.30	1050	187.16	13005.	5
105.58	1100	189.14	13005.	5
127.74	1150	193.30	13005.	5
155.67	1200	198.15	13005.	5
188.93	1250	203.21	13005.	4
229.67	1300	208.40	13005.	4
282.97	1350	213.67	13005.	4
357.70	1400	218.95	13005.	4

PROB 1. 36 IN. DIAMETER PILES 3-PILE STRUCTURE
200 FT PENETRATION -- VULCAN 040 HAMMER

OTPS. 025, MINIMUM WALL THICKNESS 1.5 IN. Q11 = 14

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS PER FOOT	RESISTANCE TONS
127.74	1150.
144.93	1250.
229.67	1300.
242.97	1350.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACME 3-PILE STRUCTURE -- HOWING 1
 APRIL 19 1976

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
 150FT PENETRATION -- VULCAN Q40 HAMMER
 GTYPE=025, MINIMUM WALL THICKNESS=1.5 IN. RU = 10

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED RLOW COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
RPR FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX RLOW FOR RESISTANCE-FLOW CURVE (RPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN Q40 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	120000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	HEIGHT (LH)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LR / IN)
1	1000.00	40000.00	1.00	.60	2780000.00
2	1000.00	27800.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TON)	UNIT WT. (PCF)	MODULUS (PST)
1	36.000	490.0	290000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS

NUMBER OF SECTIONS ADDED 0
 LENGTH OF FREE STANDING PILE (FT) 120.00

SECTION NUMBER	MATERIAL TYPE	PILE THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	40.	0	40
2	1	1.750	50.	40	90
3	1	1.500	100.	90	190
4	1	1.500	40.	190	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SIDE DAMPENING RESISTANCE - JSIDE .15
 POINT DAMPENING RESISTANCE - JPOINT .15
 SOIL QUAKE FOR SIDE - QSIDE .10
 SOIL QUAKE FOR POINT - QPOINT .03

TIP RESISTANCE
 PERCENTAGE

14.0000

TABLE 6 -- SPECIFIED ALLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

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2 34-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN OIL HAMMER

QTYP=.025, MINIMUM WALL THICKNESS=1.5 IN. MU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	CORR RSTTU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	2740000.
2	0.00	1000.00	27800.00	1.00	.90	32978619.
3	120.00	0.00	4643.54	134.46	1.00	32978619.
4	110.00	0.00	4643.54	134.46	1.00	32978619.
5	100.00	0.00	4643.54	134.46	1.00	32978619.
6	90.00	0.00	4643.54	134.46	1.00	32978619.
7	80.00	0.00	5339.52	144.30	1.00	54606898.
8	71.67	0.00	5339.52	144.30	1.00	54606898.
9	63.33	0.00	5339.52	144.30	1.00	54606898.
10	55.00	0.00	5339.52	144.30	1.00	54606898.
11	46.67	0.00	5339.52	144.30	1.00	54606898.
12	38.33	0.00	5339.52	144.30	1.00	54606898.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4917.48	162.58	1.00	44200839.
26	-78.33	0.00	4917.48	162.58	1.00	44200839.
27	-86.67	0.00	4917.48	162.58	1.00	44200839.
28	-95.00	0.00	4917.48	162.58	1.00	44200839.
29	-103.33	0.00	4917.48	162.58	1.00	44200839.
30	-111.67	0.00	4917.48	162.58	1.00	44200839.
31	-120.00	0.00	4917.48	162.58	1.00	44200839.
32	-128.33	0.00	4917.48	162.58	1.00	44200839.
33	-136.67	1000.00	4917.48	162.58	1.00	44200839.

PROB 2 36-IN. DIAMETER PILLS 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN OGD HAMMER

QTIP=.025, MINIMUM WALL THICKNESS=.5 IN. RII = 14

TABLE A -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0412 INCHES
NUMBER OF BLOWS PER FOOT = 291.61
TOTAL INTERVALS = 121

SEC	FLEV FT	MAX C STRESS LBS/50.IN.	TIME N	MAX T STRESS LRS/50.IN.	TIME N	AREA SQ.IN.	DMAX(M) IN.	D(M) IN.	V(M) FT/SEC
1	0.00	1779684	32	0.	69	1.000	1.115633	1.115093	-.05
2	0.00	1626289	43	0.	95	1.000	.679655	.666531	-.91
3	120.00	12562	45	202.	88	136.463	.664036	.642556	1.06
4	110.00	12561	48	167.	89	136.463	.662588	.625135	1.25
5	100.00	12744	50	0.	0	136.463	.662911	.604161	1.47
6	90.00	12797	52	0.	0	136.463	.662515	.581699	1.70
7	80.00	9204	54	0.	0	188.300	.660463	.558170	1.95
8	71.67	9128	56	0.	0	188.300	.657522	.543192	2.10
9	63.33	9062	58	0.	0	188.300	.652736	.528122	2.24
10	55.00	9009	61	0.	0	188.300	.645774	.512539	2.40
11	46.67	9002	63	0.	0	188.300	.636598	.498855	2.58
12	38.33	9067	66	0.	0	188.300	.624951	.481138	2.73
13	30.00	10675	69	0.	0	162.578	.610925	.465192	2.81
14	21.67	10937	71	0.	0	162.578	.592214	.446209	2.84
15	13.33	11275	74	0.	0	162.578	.570990	.426615	2.86
16	5.00	11681	76	0.	0	162.578	.547215	.406700	2.92
17	-3.33	12060	79	0.	0	162.578	.520862	.386716	3.01
18	-11.67	12303	81	0.	0	162.578	.492143	.366493	3.04
19	-20.00	12421	84	0.	0	162.578	.461654	.345454	3.00
20	-28.33	12412	86	0.	0	162.578	.429661	.324590	2.92
21	-36.67	12280	88	0.	0	162.578	.396644	.302669	2.72
22	-45.00	12013	90	0.	0	162.578	.363064	.280485	2.51
23	-53.33	11654	92	0.	0	162.578	.329372	.257783	2.32
24	-61.67	11161	95	0.	0	162.578	.295133	.234751	2.10
25	-70.00	10625	99	0.	0	162.578	.260941	.211728	1.88
26	-78.78	10162	102	0.	0	162.578	.224734	.187752	1.61
27	-87.78	9547	103	0.	0	162.578	.190425	.164846	1.38
28	-96.67	8573	103	0.	0	162.578	.159145	.143193	1.16
29	-105.56	7375	106	0.	0	162.578	.131784	.123073	-.93
30	-114.44	6102	106	0.	0	162.578	.109486	.105063	-.70
31	-123.33	4809	106	0.	0	162.578	.091485	.084539	-.51
32	-132.22	3634	105	0.	0	162.578	.077369	.076627	-.36
33	-141.11	2731	109	0.	0	162.578	.066152	.065919	-.21

PROB 2 36-IN. DIAMETER PILES 1-PILE STRUCTURE
150FT PENETRATION -- VULCAN 000 HAMMER

QTYP=,025, MINIMUM WALL THICKNESS=1.5 IN. HU = 14

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

YTP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE DYNAMIC PT TOTAL-TONS FORCE-TONS	MAX C STRESS LRS/SQ.IN. NO. LRS/SQ.IN. NO.	SEG MAX T STRESS LRS/SQ.IN. NO.	SEG
3.02	50	18.62	12657.	14
4.44	100	35.71	12797.	24
6.20	150	51.58	12797.	24
8.54	200	65.74	12797.	24
11.05	250	78.93	12797.	24
13.56	300	91.06	12797.	25
16.39	350	102.22	12797.	25
18.51	400	112.49	12797.	6
20.36	450	121.93	12797.	6
22.44	500	130.62	12797.	25
24.79	550	138.61	12797.	26
27.46	600	145.94	12797.	27
30.52	650	152.65	12797.	4
34.06	700	158.76	12797.	4
38.17	750	164.29	12797.	4
43.01	800	169.33	12797.	4
48.74	850	173.85	12797.	4
55.60	900	177.88	12797.	4
63.90	950	181.59	12797.	4
74.06	1000	184.97	12797.	4
86.60	1050	187.68	12797.	4
102.21	1100	189.77	12797.	4
121.71	1150	193.82	12797.	3
145.73	1200	199.16	12797.	3
173.28	1250	204.75	12797.	3
205.19	1300	210.45	12797.	3
243.54	1350	216.25	12797.	3
291.61	1400	222.02	12797.	3
354.62	1450	227.82	12797.	3

PROB 2 36-IN. DIAMETER PILES S-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTIP=.025, MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE =	14.00
BLOWS PER FOOT	RESISTANCE TONS
145.73	1200.
205.19	1300.
243.54	1350.
291.61	1400.

JVJUNCT. 04/20/76. *UNITED COMPUTING* 67. APX/SI. H.0.24

15.49.56SPIL,CM100,T1000.			
15.49.56SFL	64	0.000	
15.49.56SAC3400CR00023,2777100CC 3H			
15.49.56. 04/20/76.JVJUNCT			
15.49.56.PFL,40000.			
15.49.56SFL	3392	0.000	
15.49.56SFL	16384	0.000	
15.49.56.WAP,OFF.			
15.49.57SFL	256	0.000	
15.49.57.GET,PILR(CR00024)			
15.50.01.READY - PILB			
15.50.01SFL	4096	0.000	0
15.50.01SFI	72	1	
15.50.02.PILH.			
15.50.02SFL00	16384	0.000	
15.50.03SFL01	16384	0.143	190
15.50.03.FL REQUIRED TO LOAD			363708 (15608)
15.50.03.FL REQUIRED TO EXECUTE			340008 (14336)
15.50.03SFL	16384	0.147	
15.50.28.END PILORI			
15.50.2H.COST.			
15.50.2HSFL	14336	18.488	59
15.50.29.		SERVICE UNITS	52.4
15.50.29.		JOB COSTS	13.10
15.50.29SFL	12288	18.504	7
15.50.29.EXIT.			
15.50.29SJT00	2368	18.504	
15.50.29.		*FL* *CPU SFC.	*DISC PRUS* DISC ACC
15.50.29.*P.F. PRUS*P.F. ACC		*TAPE PRUS* TAPE ACC	

W.B.

Pile Driving Resistance Curves

Pile Diameter	- 36 in.
Minimum Wall Thickness	- 1.5 in.
Penetration	- 200 ft. - 150 ft.
Hammer	- Vulcan 060
Quake Factor, tip	- .025 in.

•UNITED COMPUTING* 67. APEX/SL. B.O.24

16.44.31. 04/20/76.

[illegible]

HAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACHR 3-PILE STRUCTURE -- BORING 1
 APRIL 19 1976

PROG 1
 36-IN. DIAMETER PILES 3-PILE STRUCTURE
 200FT PENETRATION -- VULCAN 060 HAMMER
 QTP=0.25, MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE 1
 NEW HAMMER DATA OPTION 1
 NEW MATERIAL DATA OPTION 1
 NEW PILE SECTION DATA OPTION 1
 NEW SOIL DATA OPTION 1
 SPECIFIED PLUM COUNT OPTION 1
 OUTPUT OPTION FOR STRESS 1
 RPA FOR STRESS OUTPUT OPTION 1
 ULTIMATE RESISTANCE INCREMENT (TONS) 275.
 MAX BLOWS FOR RESISTANCE-BLOW CURVE (RPP) 50.0
 SPECIFIED SEGMENT LENGTH (FT) 300.
 --0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION VULCAN 060 HAMMER
 HAMMER EFFICIENCY .75
 HAMMER ENERGY (FT-LBS) 100000.00
 HAMMER EXPLOSIVE FORCE (LBS) 0.00
 NUMBER OF HAMMER SEGMENTS 2

SEGMENT NUMBER	SLACK (IN)	HEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	60000.00	1.00	.60	3240000.00
2	1000.00	40200.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TUN)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	990.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 4
 NUMBER OF SECTIONS CHANGED 0

LENGTH OF FREE STANDING PILE (FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER	
				TOP	BOTTOM
1	1	1.250	40.	0	40
2	1	1.750	100.	40	140
3	1	1.500	100.	140	240
4	1	1.500	40.	240	320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE = JSIDE .15
POINT DAMPENING RESISTANCE = JPONT .15
SOIL SHAKE FOR SIDE = GSIDE .10
SOIL SHAKE FOR POINT = GPONT .03

TIP RESISTANCE
PERCENTAGE

14.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB

1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 060 HAMMER

QTYPE 025, MINIMUM WALL THICKNESS 1.5 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	FLV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	CONE RSTTU	SPR STIFF LBS/IN.
1	0.00	1000.00	60000.00	1.00	.60	3240000.
2	0.00	1000.00	40200.00	1.00	.90	32978619.
3	120.00	0.00	4643.54	136.46	1.00	32978619.
4	110.00	0.00	4643.54	136.46	1.00	32978619.
5	100.00	0.00	4643.54	136.46	1.00	32978619.
6	90.00	0.00	4643.54	136.46	1.00	32978619.
7	80.00	0.00	5339.52	188.30	1.00	54606898.
8	71.67	0.00	5339.52	188.30	1.00	54606898.
9	63.33	0.00	5339.52	188.30	1.00	54606898.
10	55.00	0.00	5339.52	188.30	1.00	54606898.
11	46.67	0.00	5339.52	188.30	1.00	54606898.
12	38.33	0.00	5339.52	188.30	1.00	54606898.
13	30.00	0.00	5339.52	188.30	1.00	54606898.
14	21.67	0.00	5339.52	188.30	1.00	54606898.
15	13.33	0.00	5339.52	188.30	1.00	54606898.
16	5.00	0.00	5339.52	188.30	1.00	54606898.
17	-3.33	0.00	5339.52	188.30	1.00	54606898.
18	-11.67	0.00	5339.52	188.30	1.00	54606898.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4610.13	162.58	1.00	47147562.
26	-78.33	0.00	4610.13	162.58	1.00	47147562.
27	-86.67	0.00	4610.13	162.58	1.00	47147562.
28	-95.00	0.00	4610.13	162.58	1.00	47147562.
29	-103.33	0.00	4610.13	162.58	1.00	47147562.
30	-111.67	0.00	4610.13	162.58	1.00	47147562.
31	-120.00	0.00	4917.48	162.58	1.00	44200839.
32	-128.33	0.00	4917.48	162.58	1.00	44200839.
33	-136.67	0.00	4917.48	162.58	1.00	44200839.
34	-145.00	0.00	4917.48	162.58	1.00	44200839.
35	-153.33	0.00	4917.48	162.58	1.00	44200839.
36	-161.67	0.00	4917.48	162.58	1.00	44200839.
37	-170.00	0.00	4917.48	162.58	1.00	44200839.
38	-178.33	0.00	4917.48	162.58	1.00	44200839.
39	-186.67	0.00	4917.48	162.58	1.00	44200839.
40	-195.00	1000.00	4917.48	162.58	1.00	44200839.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 600 HAMMER

QTIPS .025, MINIMUM WALL THICKNESS 1.5 IN. RU = 14

TABLE A -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SPT OF PILE = .0427 INCHES
NUMBER OF BLOW PER FOOT = 280.78
TOTAL INTERVALS = 141

SEG	FLEV FT	MAX C STRESS LBS/SQ. IN.	TIME N	MAX T STRESS LBS/SQ. IN.	TIME N	AREA SQ. IN.	D MAX (M) IN.	D (M) IN.	V (M) FT/SEC
1	0.00	2281172.	34	0.	73	1.000	1.468829	1.466484	-2.24
2	0.00	1919228.	49	0.	0	1.000	.928824	.925151	-2.55
3	120.00	14413.	51	0.	0	136.443	.895952	.888169	-2.72
4	110.00	14730.	54	0.	0	136.463	.850480	.850480	-2.91
5	100.00	14990.	56	0.	0	136.443	.866103	.829194	-1.10
6	90.00	15141.	58	0.	0	136.463	.860748	.797562	-1.31
7	80.00	11001.	60	0.	0	188.300	.850422	.764868	-1.52
8	71.67	11024.	62	0.	0	188.300	.849518	.744582	-1.66
9	63.33	11031.	64	0.	0	188.300	.843257	.723891	-1.80
10	55.00	11011.	66	0.	0	188.300	.835053	.702927	-1.94
11	46.67	10987.	68	0.	0	188.300	.825922	.681797	-2.07
12	38.33	10992.	71	0.	0	188.300	.814471	.660615	-2.19
13	30.00	11039.	73	0.	0	188.300	.800964	.639482	-2.29
14	21.67	11136.	76	0.	0	188.300	.785246	.614473	-2.34
15	13.33	11286.	78	0.	0	188.300	.767255	.597653	-2.46
16	5.00	11500.	81	0.	0	188.300	.746940	.577094	-2.51
17	-3.33	11735.	84	0.	0	188.300	.724282	.556820	-2.55
18	-11.67	11954.	86	0.	0	188.300	.694382	.536717	-2.57
19	-20.00	14005.	89	0.	0	162.578	.672496	.516558	-2.58
20	-28.33	14085.	91	0.	0	162.578	.639811	.492917	-2.60
21	-36.67	14092.	94	0.	0	162.578	.605876	.468833	-2.59
22	-45.00	14021.	96	0.	0	162.578	.570927	.444249	-2.56
23	-53.33	13466.	98	0.	0	162.578	.535362	.419158	-2.49
24	-61.67	13441.	101	0.	0	162.578	.499336	.393717	-2.37
25	-70.00	13345.	103	0.	0	162.578	.463070	.368013	-2.26
26	-78.33	12976.	106	0.	0	162.578	.427016	.341960	-2.12
27	-86.67	12521.	108	0.	0	162.578	.391131	.315918	-1.96
28	-95.00	11947.	111	0.	0	162.578	.355234	.289890	-1.83
29	-103.33	11374.	114	0.	0	162.578	.319584	.244146	-1.67
30	-111.67	10824.	118	0.	0	162.578	.284327	.238784	-1.53
31	-120.00	10394.	119	0.	0	162.578	.250290	.214284	-1.35
32	-128.33	9781.	119	0.	0	162.578	.215925	.189432	-1.19
33	-137.78	8941.	121	0.	0	162.578	.184344	.166212	-1.05
34	-146.67	7995.	123	0.	0	162.578	.155877	.144630	-2.91
35	-155.56	6898.	125	0.	0	162.578	.131408	.124992	-2.75
36	-164.44	5738.	125	0.	0	162.578	.110729	.107329	-2.45
37	-173.33	4733.	124	0.	0	162.578	.093562	.091840	-2.30
38	-182.22	3794.	126	0.	0	162.578	.079332	.078718	-2.20
39	-191.11	3459.	128	0.	0	162.578	.067734	.067505	-2.20

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 060 HAMMER

QTIP=.025, MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 9 -- RESISTANCE=BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS/FT.	RESISTANCE DYNAMIC PT TOTAL-TONS FORCE-10NS	MAX C STRESS LBS/SQ.IN. NO.	SFG MAX T STRESS LBS/SQ.IN. NO.	SFG
2.07	50	20.57	1497.	28
2.90	100	39.53	1510.	28
4.00	150	56.99	1514.	28
5.39	200	73.03	1514.	28
7.00	250	87.79	1514.	29
8.74	300	101.37	1514.	29
10.51	350	113.45	1514.	29
12.95	400	125.42	1514.	6
14.14	450	135.88	1514.	6
15.46	500	145.59	1514.	6
16.92	550	154.51	1514.	30
18.56	600	162.72	1514.	31
20.40	650	170.26	1514.	31
22.48	700	177.19	1514.	32
24.86	750	183.56	1514.	39
27.58	800	189.41	1514.	39
30.72	850	194.77	1514.	39
34.98	900	199.60	1514.	39
38.68	950	203.83	1514.	39
43.79	1000	207.50	1514.	39
49.90	1050	210.77	1514.	39
57.32	1100	213.78	1514.	39
66.41	1150	216.35	1514.	39
77.68	1200	218.20	1514.	39
91.45	1250	219.59	1514.	39
109.77	1300	224.06	1514.	39
132.49	1350	229.16	1514.	39
160.44	1400	234.57	1514.	39
192.99	1450	239.85	1514.	39
231.93	1500	244.49	1514.	39
280.78	1550	248.67	1514.	39
346.41	1600	252.60	1514.	39

PROJ 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 060 HAMMER

QTIPs.025, MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS PER FOOT	RESISTANCE TONS
132.49	1350.
192.99	1450.
231.93	1500.
280.78	1550.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACUR 3-PILE STRUCTURE -- WORKING 1
 APRIL 19 1976

PROB
 2

36-IN. DIAMETER PILES 3-PILE STRUCTURE
 150FT PENETRATION -- VULCAN 040 HAMMER
 OTTPE.025, MINIMUM WALL THICKNESS 1.5 IN. RU = 14

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED ALLOW COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
APR FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX BLOWS FOR RESISTANCE-BLOW CURVE (RBF)	300.
SPECIFIED SEGMENT LENGTH (FT)	=0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 060 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	180000.00
HAMMER EXPLOSIVE FORCE (LBS)	=0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LB / IN)
1	1000.00	60000.00	1.00	.60	3200000.00
2	1000.00	40200.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1			
MATERIAL TYPE	(TOD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS	4
NUMBER OF SECTIONS CHANGED	0

NUMBER OF SECTIONS ALONG
LENGTH OF FREE STANDING PILE (FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER	
				TOP	BOTTOM
1	1	1.250	40.	0	40
2	1	1.750	50.	40	90
3	1	1.500	100.	90	190
4	1	1.500	40.	190	230

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPING RESISTANCE - JSIDE .15
POINT DAMPING RESISTANCE - JPPOINT .15
SOIL SHAKE FOR SIDE - OSIDE .10
SOIL SHAKE FOR POINT - OPOINT .03

TIP RESISTANCE
PERCENTAGE

14,0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

QTYPE=025, MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELFV FT	SLACK IN.	WFIGHT LBS	AREA SQ. IN.	CHEF RSTTU	SPR STIFF LBS/IN.
1	0.00	1000.00	60000.00	1.00	.60	3240000.
2	0.00	1000.00	40200.00	1.00	.90	32978619.
3	120.00	0.00	4643.54	136.46	1.00	32978619.
4	110.00	0.00	4643.54	136.46	1.00	32978619.
5	100.00	0.00	4643.54	136.46	1.00	32978619.
6	90.00	0.00	4643.54	136.46	1.00	32978619.
7	80.00	0.00	5339.52	188.30	1.00	54606898.
8	71.67	0.00	5339.52	188.30	1.00	54606898.
9	63.33	0.00	5339.52	188.30	1.00	54606898.
10	55.00	0.00	5339.52	188.30	1.00	54606898.
11	46.67	0.00	5339.52	188.30	1.00	54606898.
12	38.33	0.00	5339.52	188.30	1.00	54606898.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4917.48	162.58	1.00	44200839.
26	-78.69	0.00	4917.48	162.58	1.00	44200839.
27	-87.78	0.00	4917.48	162.58	1.00	44200839.
28	-96.67	0.00	4917.48	162.58	1.00	44200839.
29	-105.56	0.00	4917.48	162.58	1.00	44200839.
30	-114.44	0.00	4917.48	162.58	1.00	44200839.
31	-123.33	0.00	4917.48	162.58	1.00	44200839.
32	-132.22	0.00	4917.48	162.58	1.00	44200839.
33	-141.11	1000.00	4917.48	162.58	1.00	44200839.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN OIL HAMMER

QTIP=.025, MINIMUM WALL THICKNESS=1.5 IN. RU = 14

TABLE 8 -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 14.00

PERMANENT SET OF PILE = .0433 INCMPS
NUMBER OF HITS PER FOOT = 277.24
TOTAL INTERVALS = 136

SEG	ELEV FT	MAX C STRESS LBS/SQ. IN.	TIME N	MAX T STRESS LBS/SQ. IN.	TIME N	AREA SQ. IN.	D MAX (M) IN.	D (M) IN.	V (M) FT/SEC
1	0.00	2281172.	34	0.	74	1.000	1.478018	1.478018	-1.02
2	0.00	1918744.	49	0.	0	1.000	.899438	.899438	-1.52
3	120.00	14390.	51	0.	0	136.443	.844346	.844346	-1.70
4	110.00	14433.	53	0.	0	136.463	.840989	.840989	-1.88
5	100.00	14785.	55	0.	0	136.463	.873315	.873315	-2.06
6	90.00	14820.	57	0.	0	136.463	.864442	.864442	-2.24
7	80.00	10661.	59	0.	0	188.300	.853286	.853286	-2.43
8	71.67	10586.	61	0.	0	188.300	.844471	.844471	-2.54
9	63.33	10528.	64	0.	0	188.300	.833336	.833336	-2.67
10	55.00	10494.	66	0.	0	188.300	.819740	.819740	-2.78
11	46.67	10545.	69	0.	0	188.300	.803615	.803615	-2.89
12	38.33	10719.	72	0.	0	188.300	.784489	.784489	-2.96
13	30.00	12723.	75	0.	0	162.578	.764023	.764023	-2.99
14	21.67	13122.	78	0.	0	162.578	.735179	.735179	-2.99
15	13.33	13600.	81	0.	0	162.578	.704541	.704541	-2.98
16	5.00	14138.	83	0.	0	162.578	.671148	.671148	-2.90
17	-3.33	14618.	86	0.	0	162.578	.635166	.635166	-2.79
18	-11.67	14928.	88	0.	0	162.578	.596826	.596826	-2.70
19	-20.00	15071.	90	0.	0	162.578	.556632	.556632	-2.54
20	-28.33	15051.	92	0.	0	162.578	.515114	.515114	-2.38
21	-36.67	14866.	95	0.	0	162.578	.472482	.472482	-2.18
22	-45.00	14555.	97	0.	0	162.578	.429282	.429282	-2.01
23	-53.33	14090.	100	0.	0	162.578	.385401	.385401	-1.86
24	-61.67	13537.	104	0.	0	162.578	.342021	.342021	-1.72
25	-70.00	12947.	106	0.	0	162.578	.299826	.299826	-1.58
26	-78.89	12145.	107	0.	0	162.578	.256953	.256953	-1.44
27	-87.78	11148.	108	0.	0	162.578	.216935	.216935	-1.32
28	-96.67	9894.	111	0.	0	162.578	.180884	.180884	-1.21
29	-105.56	8543.	112	0.	0	162.578	.148945	.148945	-1.12
30	-114.44	6970.	113	0.	0	162.578	.121881	.121881	-1.04
31	-123.33	5366.	111	0.	0	162.578	.099333	.099333	-.92
32	-132.22	4143.	113	0.	0	162.578	.081640	.081640	-.76
33	-141.11	3154.	114	0.	0	162.578	.068283	.068283	-.58

```

PR08      2.0000  36-IN. DIAMETER PILES 3-PILE STRUCTURE
          150FT PENETRATION -- WILL CAN OWN WATER

```

QTYPE-025-ALUMINUM WALL THICKNESS: .5 IN. QU = 14

TABLE 9 -- RFSTYSTANCE=BLDN CURVE DATA

TIP RESISTANCE PERCENTAGE = 14.00

ROWS/FT.	RESISTANCE DYNAMIC PT	MAX C STRESS	SEG	MAX T STRESS	SEG
TOTAL-TONS	FORCE-TONS	LBS/SQ.IN. NO.	LBS/SQ.IN. NO.	LBS/SQ.IN. NO.	LBS/SQ.IN. NO.
2.24	50.	20.51	14600.	5	9795.
3.11	100.	39.34	14815.	6	4584.
4.24	150.	56.61	14820.	6	7380.
5.70	200.	72.48	14820.	6	4271.
7.42	250.	87.07	14820.	6	5262.
9.14	300.	100.49	14820.	6	4673.
12.23	350.	112.83	14820.	6	4023.
13.55	400.	124.20	14820.	6	3162.
14.58	450.	134.68	14820.	6	2300.
15.03	500.	144.33	14820.	6	1645.
17.43	550.	153.23	14820.	6	1102.
19.10	600.	161.44	14820.	6	142.
20.97	650.	169.01	14820.	6	0.
23.04	700.	175.99	14820.	6	0.
25.46	750.	182.44	14820.	6	0.
28.17	800.	188.41	14820.	6	0.
31.28	850.	193.92	14820.	6	0.
34.86	900.	198.94	14820.	6	0.
39.02	950.	203.40	14820.	6	0.
43.00	1000.	207.37	14820.	6	0.
49.66	1050.	210.90	14820.	6	0.
56.54	1100.	214.12	14820.	6	0.
64.82	1150.	217.04	14820.	6	0.
74.88	1200.	219.31	14820.	6	0.
87.23	1250.	221.01	14820.	6	0.
102.46	1300.	224.13	14820.	6	0.
121.30	1350.	229.54	14820.	6	0.
144.26	1400.	235.28	14820.	6	0.
170.24	1450.	241.14	14820.	20	0.
200.10	1500.	246.70	14928.	19	0.
234.77	1550.	251.75	15000.	19	0.
277.24	1600.	256.40	15071.	19	0.
330.70	1650.	260.85	15159.	19	0.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 040 HAMMER

OTIP= .025, MINIMUM WALL THICKNESS= 1.5 IN. RU = 14

TABLE 10 -- SPECIFIED BLOW DATA

TIP RESISTANCE PERCENTAGE = 14.00

BLOWS PER FOOT	RESISTANCE TONS
144.26	1400.
200.19	1500.
234.77	1550.
277.24	1600.

JVJ00PZ. 04/20/76. *UNITED COMPUTING* 07. ADX/SL. H.O.24

16.42.21SPIL,CW100,71000.				
16.42.21SFL	64	0.000		
16.42.21SAC3000CRR0023,2777100CC)A				
16.42.21. 04/20/76.JVJ00PZ				
16.42.22.RFL,40000.				
16.42.22SFL	3592	0.000		
16.42.22SFL	16384	0.000		
16.42.22.WAP,OFF.				
16.42.22SFL	256	0.000		
16.42.22.GET,PILR(CR00024)				
16.42.27.READY = PILR				
16.42.27SFL	4096	0.000	0	0.
16.42.27SFI	72	1		
16.42.28.PILH.				
16.42.28SFL00	16384	0.002		
16.42.32SFL01	16384	0.143	190	6
16.42.32.FL REQUIRED TO LOAD			36370R (15608)	
16.42.32SFL REQUIRED TO EXECUTE			34000R (14336)	
16.42.32SFL	16384	0.14R		
16.43.10.END PILORI				
16.43.10.COST.				
16.43.10SFL	14336	22.595	60	5
16.43.12.		SERVICE UNITS	63.0	
16.43.12.		JOB COSTS	15.74	
16.43.12SFL	12288	22.617	7	5
16.43.12.EXIT.				
16.43.12SUT00	236R	22.617		
16.43.12.	*FL*	*CPU SEC.	*DISC PRUS*	*DISC ACC
16.43.12.*P.F.	*PRUS*P.F.	ACC	*TAPE PRUS*	*TAPE ACC

Pile Driving Resistance Curves

Pile Diameter	- 36 in.
Minimum Wall Thickness	- 1.5 in.
Penetration	- 200 ft.
	- 150 ft.
Hammer	- Vulcan 060
Quake Factor, tip	- .10 in.

•UNITED COMPUTING• 67. APXY/SL. H.O.24

07.57.43. 04/29/76.

[illegible]

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR AC4R 3-PILE STRUCTURE -- WORKING 1
 APRIL 19 1976

PROB 1
 36-IN. DIAMETER PILES 3-PILE STRUCTURE
 200FT PENETRATION -- VULCAN 060 HAMMER
 GPIPE 10 MINIMUM WALL THICKNESS 1.5 IN. RU = 35

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED HLOW COUNT OPTION	1
OUTPUT OPTION FOR STRESS	1
HPF FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX PLUMS FOR RESISTANCE-HLOW CURVE (HPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 060 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	180000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LR / IN)
1	1000.00	60000.00	1.00	.40	3240000.00
2	1000.00	40200.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES = 1

MATERIAL TYPE	(TUD)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS 4

NUMBER OF SECTIONS ADDED
LENGTH OF PIPE STAKING WILE (FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	40.	0	40
2	1	1.750	100.	40	140
3	1	1.500	100.	140	240
4	1	1.500	80.	240	320

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
SIDE DAMPENING RESISTANCE - JSIDE .15
POINT DAMPENING RESISTANCE - JPONT .15
SOIL SHAKE FOR SIDE - OSIDE .10
SOIL SHAKE FOR POINT - OPONT .10

TIP RESISTANCE
PERCENTAGE

35.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 1 36-IN. DIAMETER PILLS 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 060 HAMMER

QTY=10, MINIMUM WALL THICKNESS=1.5 IN. PU = 35

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT.	SLACK IN.	WEIGHT LBS.	AREA SQ. IN.	COEF RSTTU	SPR STIFF LBS/IN.
1	0.00	1000.00	40000.00	1.00	.60	3240000.
2	0.00	1000.00	40200.00	1.00	.90	32978619.
3	120.00	0.00	4643.54	136.46	1.00	32978619.
4	110.00	0.00	4643.54	136.46	1.00	32978619.
5	100.00	0.00	4643.54	136.46	1.00	32978619.
6	90.00	0.00	4643.54	136.46	1.00	32978619.
7	80.00	0.00	5359.52	168.30	1.00	54606898.
8	71.67	0.00	5359.52	168.30	1.00	54606898.
9	63.33	0.00	5359.52	168.30	1.00	54606898.
10	55.00	0.00	5359.52	168.30	1.00	54606898.
11	46.67	0.00	5359.52	168.30	1.00	54606898.
12	38.33	0.00	5359.52	168.30	1.00	54606898.
13	30.00	0.00	5359.52	168.30	1.00	54606898.
14	21.67	0.00	5359.52	168.30	1.00	54606898.
15	13.33	0.00	5359.52	168.30	1.00	54606898.
16	5.00	0.00	5359.52	168.30	1.00	54606898.
17	-3.33	0.00	5359.52	168.30	1.00	54606898.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4610.13	162.58	1.00	47147562.
26	-78.33	0.00	4610.13	162.58	1.00	47147562.
27	-86.67	0.00	4610.13	162.58	1.00	47147562.
28	-95.00	0.00	4610.13	162.58	1.00	47147562.
29	-103.33	0.00	4610.13	162.58	1.00	47147562.
30	-111.67	0.00	4610.13	162.58	1.00	47147562.
31	-120.00	0.00	4917.48	162.58	1.00	44200839.
32	-128.33	0.00	4917.48	162.58	1.00	44200839.
33	-136.67	0.00	4917.48	162.58	1.00	44200839.
34	-145.00	0.00	4917.48	162.58	1.00	44200839.
35	-153.33	0.00	4917.48	162.58	1.00	44200839.
36	-161.67	0.00	4917.48	162.58	1.00	44200839.
37	-170.00	0.00	4917.48	162.58	1.00	44200839.
38	-178.33	0.00	4917.48	162.58	1.00	44200839.
39	-186.67	0.00	4917.48	162.58	1.00	44200839.
40	-195.00	1000.00	4917.48	162.58	1.00	44200839.

PROB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200 FT PENETRATION -- VULCAN 060 HAMMER

QTIPS, 10, MINIMUM WALL THICKNESS 1.5 IN. MU = 35

TABLE B -- MAXIMUM STRESS DATA

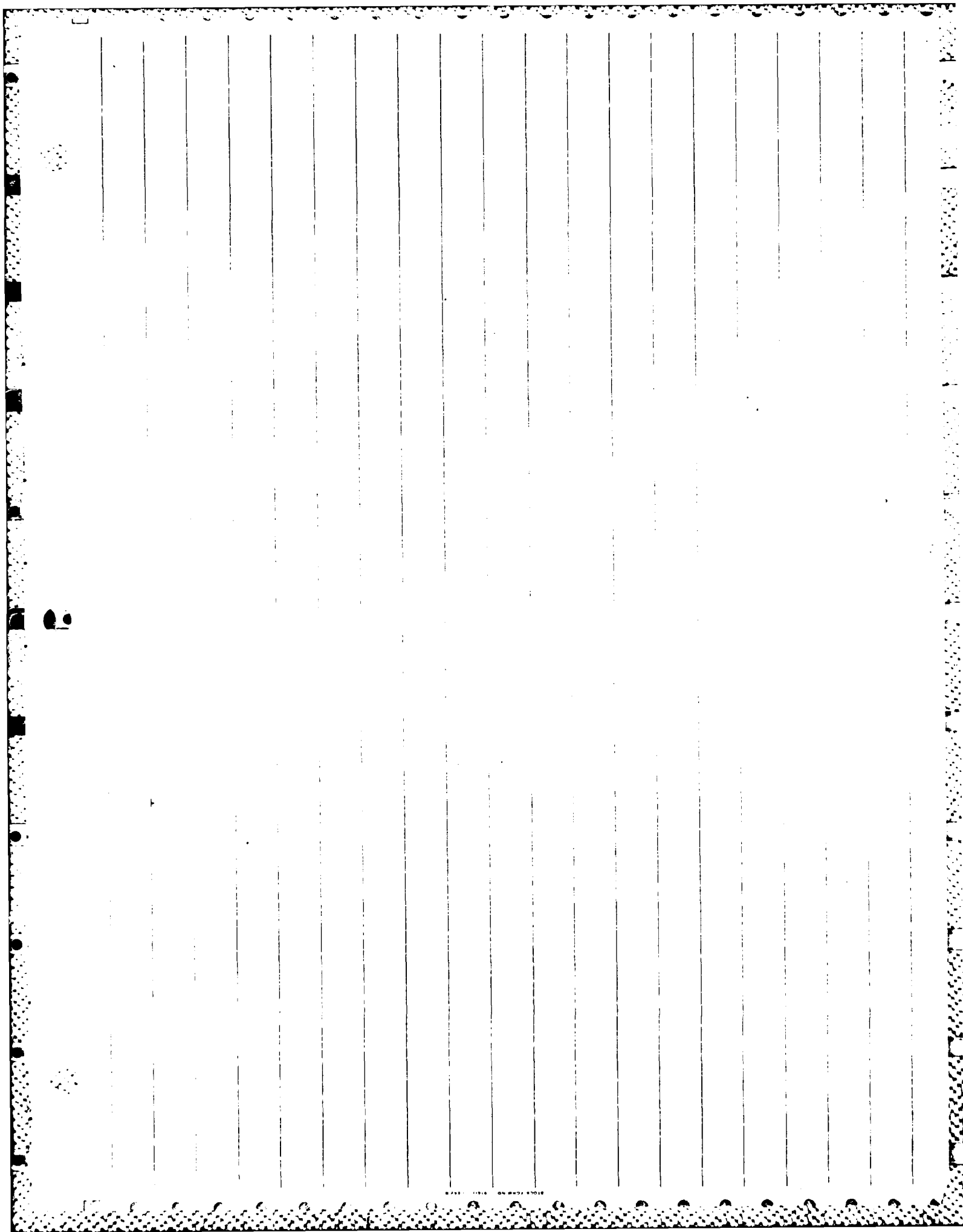
TIP RESISTANCE PERCENTAGE = 15.00

PERMANENT SET OF PILE = .0360 INCHES

NUMBER OF BLOWS PER FOOT = 333.25

TOTAL INTERVALS = 145

SEG	ELEV FT	MAX C STRESS LBS/SQ. IN.	TIME N	MAX T STRESS LBS/SQ. IN.	TIME N	AREA SQ. IN.	D MAX (M) IN.	D (M) IN.	V (M) FT/SEC
1	0.00	2281172.	34	0.	73	1.000	1.486792	1.486708	-0.04
2	0.00	1919228.	49	0.	0	1.000	.964504	.961827	-0.47
3	120.00	14413.	51	0.	0	136.463	.933899	.929348	-0.57
4	110.00	14730.	54	0.	0	136.463	.913054	.905390	-0.67
5	100.00	14990.	56	0.	0	136.463	.893527	.879821	-0.78
6	90.00	15141.	58	0.	0	136.463	.882559	.852855	-0.90
7	80.00	11001.	60	0.	0	188.300	.877403	.824708	-1.03
8	71.67	11024.	62	0.	0	188.300	.873916	.807084	-1.12
9	63.33	11028.	64	0.	0	188.300	.869511	.788956	-1.21
10	55.00	11003.	66	0.	0	188.300	.863949	.770463	-1.30
11	46.67	10967.	68	0.	0	188.300	.856977	.751757	-1.41
12	38.33	10945.	70	0.	0	188.300	.848436	.732065	-1.51
13	30.00	10949.	73	0.	0	188.300	.838179	.714184	-1.60
14	21.67	10986.	75	0.	0	188.300	.826122	.695541	-1.69
15	13.33	11060.	78	0.	0	188.300	.812126	.671139	-1.77
16	5.00	11181.	80	0.	0	188.300	.796199	.658993	-1.85
17	-3.33	11128.	83	0.	0	188.300	.778336	.641060	-1.93
18	-11.67	11479.	86	0.	0	188.300	.758587	.623236	-2.02
19	-20.00	13421.	88	0.	0	162.578	.737108	.605317	-2.12
20	-28.33	13497.	90	0.	0	162.578	.710840	.584220	-2.22
21	-36.67	13429.	93	0.	0	162.578	.683440	.562721	-2.30
22	-45.00	13510.	95	0.	0	162.578	.655023	.540451	-2.35
23	-53.33	13437.	97	0.	0	162.578	.625787	.518642	-2.37
24	-61.67	13316.	100	0.	0	162.578	.596111	.496217	-2.35
25	-70.00	13147.	102	0.	0	162.578	.566120	.473596	-2.32
26	-78.33	12953.	104	0.	0	162.578	.536143	.450748	-2.25
27	-86.67	12852.	106	0.	0	162.578	.505704	.427756	-2.17
28	-95.00	12731.	109	0.	0	162.578	.474638	.404478	-2.09
29	-103.33	11904.	111	0.	0	162.578	.442548	.380903	-2.03
30	-111.67	11422.	112	0.	0	162.578	.409845	.356819	-1.98
31	-120.00	11164.	119	0.	0	162.578	.377000	.332301	-1.89
32	-128.89	10984.	121	0.	0	162.578	.342531	.305786	-1.79
33	-137.78	10715.	121	0.	0	162.578	.309196	.279225	-1.55
34	-146.67	10291.	123	0.	0	162.578	.276540	.253493	-1.32
35	-155.56	9812.	125	0.	0	162.578	.242777	.228548	-1.09
36	-164.44	9058.	129	0.	0	162.578	.212768	.204308	-0.91
37	-173.33	8633.	131	0.	0	162.578	.184550	.180687	-0.65
38	-182.22	7869.	130	0.	0	162.578	.159182	.157817	-0.46



PRCB 1 36-IN. DIAMETER PILES 3-PILE STRUCTURE
200FT PENETRATION -- VULCAN 060 HAMMER

OTYPE=10 ,MINIMUM WALL THICKNESS=1.5 IN. HU = 35

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS/FT.	RESISTANCE DYNAMIC PT TOTAL-TONS FORCE-TONS	MAX C STRESS LRS/SQ.IN. MIN.	SEG MAX T STRESS LRS/SQ.IN. MIN.	SEG
2.02	50.	51.31	14094.	28
2.89	100.	98.45	15114.	27
4.07	150.	141.64	15141.	28
5.59	200.	181.23	15141.	28
7.43	250.	217.58	15141.	28
9.30	300.	250.95	15141.	28
11.45	350.	281.60	15141.	6
13.98	400.	309.75	15141.	6
15.41	450.	335.63	15141.	6
17.02	500.	359.41	15141.	5
18.83	550.	381.27	15141.	30
20.89	600.	401.38	15141.	30
23.25	650.	419.88	15141.	39
25.94	700.	436.87	15141.	39
29.15	750.	452.04	15141.	39
32.49	800.	466.64	15141.	39
37.34	850.	479.57	15141.	39
42.71	900.	491.41	15141.	39
49.27	950.	502.33	15141.	39
57.45	1000.	512.29	15141.	39
67.85	1050.	521.06	15141.	39
81.41	1100.	528.53	15141.	39
99.68	1150.	535.01	15141.	39
125.22	1200.	541.12	15141.	39
163.07	1250.	546.32	15141.	39
223.76	1300.	550.23	15141.	39
333.25	1350.	552.59	15141.	39

PROB 1 36-IN. DIAMETER PILLS 3-PILE STRUCTURE
200BT PENETRATION -- VULCAN OAD HAMMER

OTIPS.10 ,MINIMUM WALL THICKNESS=1.5 IN. RU = 35

TABLE 10 -- SPECIFIED HLOM DATA

TIP RESISTANCE PERCENTAGE = 35.00

HLOMS PER
FOOT RESISTANCE
TONS

125.22	1200.
223.76	1300.
243.43	1312.
291.94	1335.

WAVE EQUATION ANALYSIS FOR 36-IN. DIAMETER PIPE PILES
 MC CLELLAND REPORT DATA FOR ACRP 3-PILE STRUCTURE -- BORING 1
 APRIL 19 1976

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
 150FT PENETRATION -- VULCAN 060 HAMMER
 QTP=10 , MINIMUM WALL THICKNESS=1.5 IN. RI=35

TABLE 1 -- PROGRAM CONTROL DATA

PILE TYPE	1
NEW HAMMER DATA OPTION	1
NEW MATERIAL DATA OPTION	1
NEW PILE SECTION DATA OPTION	1
NEW SOIL DATA OPTION	1
SPECIFIED FLOW CURVE OPTION	1
OUTPUT OPTION FOR STRESS	1
RPE FOR STRESS OUTPUT OPTION	275.
ULTIMATE RESISTANCE INCREMENT (TONS)	50.0
MAX FLOWS FOR RESISTANCE-FLOW CURVE (HPF)	300.
SPECIFIED SEGMENT LENGTH (FT)	-0.00

TABLE 2 -- HAMMER DATA

HAMMER DESCRIPTION	VULCAN 060 HAMMER
HAMMER EFFICIENCY	.75
HAMMER ENERGY (FT-LBS)	180000.00
HAMMER EXPLOSIVE FORCE (LBS)	-0.00
NUMBER OF HAMMER SEGMENTS	2

SEGMENT NUMBER	SLACK (IN)	WEIGHT (LB)	AREA (SQ IN)	COEF OF RESTITUTION	SPRING CONSTANT (LR / IN)
1	1000.00	60000.00	1.00	.60	3200000.00
2	1000.00	40200.00	1.00	.90	0.00

TABLE 3 -- MATERIAL DATA

NUMBER OF MATERIAL TYPES	1
--------------------------	---

MATERIAL TYPE	(TON)	UNIT WT. (PCF)	MODULUS (PSI)
1	36.000	490.0	29000000.

TABLE 4 -- PILE SECTION DATA

TOTAL NUMBER OF PILE SECTIONS	4
-------------------------------	---

NUMBER OF SECTIONS ADDED 6
 LENGTH OF PIPE STANDING PILE (FT) 120.00

SECTION NUMBER	MATERIAL TYPE	WALL THICKNESS (IN)	LENGTH (FT)	STATION NUMBER TOP	STATION NUMBER BOTTOM
1	1	1.250	40.	0	40
2	1	1.750	50.	40	90
3	1	1.500	100.	90	190
4	1	1.500	40.	190	270

TABLE 5 -- SOIL DATA

NUMBER OF TIP RESISTANCE PERCENTAGES 1
 SIDE DAMPENING RESISTANCE = JSIDE .15
 POINT DAMPENING RESISTANCE = JPOINT .15
 SOIL SHAKE FOR SIDE = OSIDE .10
 SOIL SHAKE FOR POINT = OPOINT .10

TIP RESISTANCE PERCENTAGE

35.0000

TABLE 6 -- SPECIFIED BLOW COUNT DATA

NUMBER OF SPECIFIED BLOW COUNTS 4

BLOWS PER FOOT	TOLERANCE
150.	25.
200.	25.
250.	25.
300.	25.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 060 HAMMER

OTYPE 10 MINIMUM WALL THICKNESS 1.5 IN. MU = 35

TABLE 7 -- PILE SEGMENT DATA

SEGMENT	ELEV FT	SLACK IN.	WEIGHT LBS	AREA SQ. IN.	COEF RSTTU	SPR STIFF LBS/IN.
1	0.00	1000.00	60000.00	1.00	.60	3200000.
2	0.00	1000.00	40200.00	1.00	.90	32078619.
3	120.00	0.00	4643.50	136.46	1.00	32078619.
4	110.00	0.00	4643.50	136.46	1.00	32078619.
5	100.00	0.00	4643.50	136.46	1.00	32078619.
6	90.00	0.00	4643.50	136.46	1.00	32078619.
7	80.00	0.00	5339.52	188.30	1.00	54606898.
8	71.67	0.00	5339.52	188.30	1.00	54606898.
9	63.33	0.00	5339.52	188.30	1.00	54606898.
10	55.00	0.00	5339.52	188.30	1.00	54606898.
11	46.67	0.00	5339.52	188.30	1.00	54606898.
12	38.33	0.00	5339.52	188.30	1.00	54606898.
13	30.00	0.00	4610.13	162.58	1.00	47147562.
14	21.67	0.00	4610.13	162.58	1.00	47147562.
15	13.33	0.00	4610.13	162.58	1.00	47147562.
16	5.00	0.00	4610.13	162.58	1.00	47147562.
17	-3.33	0.00	4610.13	162.58	1.00	47147562.
18	-11.67	0.00	4610.13	162.58	1.00	47147562.
19	-20.00	0.00	4610.13	162.58	1.00	47147562.
20	-28.33	0.00	4610.13	162.58	1.00	47147562.
21	-36.67	0.00	4610.13	162.58	1.00	47147562.
22	-45.00	0.00	4610.13	162.58	1.00	47147562.
23	-53.33	0.00	4610.13	162.58	1.00	47147562.
24	-61.67	0.00	4610.13	162.58	1.00	47147562.
25	-70.00	0.00	4917.48	162.58	1.00	44200839.
26	-78.33	0.00	4917.48	162.58	1.00	44200839.
27	-86.67	0.00	4917.48	162.58	1.00	44200839.
28	-95.00	0.00	4917.48	162.58	1.00	44200839.
29	-103.33	0.00	4917.48	162.58	1.00	44200839.
30	-111.67	0.00	4917.48	162.58	1.00	44200839.
31	-120.00	0.00	4917.48	162.58	1.00	44200839.
32	-128.33	0.00	4917.48	162.58	1.00	44200839.
33	-136.67	0.00	4917.48	162.58	1.00	44200839.
34	-145.00	1000.00	4917.48	162.58	1.00	44200839.

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN OAK HAMMER

QTY=10, MINIMUM WALL THICKNESS=1.5 IN. RU = 35

TABLE B -- MAXIMUM STRESS DATA

TIP RESISTANCE PERCENTAGE = 35.00

PERMANENT SET OF PILE = .0412 INCHES
NUMBER OF BLOWS PER FOOT = 291.15
TOTAL INTERVALS = 140

SEC	ELEV FT	MAX C STRESS LBS/SQ. IN.	TYPE N	MAX T STRESS LBS/SQ. IN.	TIME N	AREA SQ. IN.	D MAX (M) IN.	D (M) IN.	V (M) FT/SEC
1	0.00	228177.	34	0.	74	1.000	1.493421	1.493421	-1.04
2	0.00	1918744.	49	0.	0	1.000	.924801	.924801	-1.10
3	120.00	14390.	51	0.	0	136.463	.913281	.913281	-1.21
4	110.00	14633.	53	0.	0	136.463	.897400	.855108	-1.33
5	100.00	14745.	55	0.	0	136.463	.889229	.822221	-1.45
6	90.00	14820.	57	0.	0	136.463	.881894	.788307	-1.56
7	80.00	14861.	59	0.	0	148.300	.873053	.753526	-1.70
8	71.67	10545.	61	0.	0	148.300	.866136	.731975	-1.80
9	63.33	10522.	62	0.	0	148.300	.857402	.709006	-1.94
10	55.00	10443.	64	0.	0	148.300	.846647	.687308	-2.08
11	46.67	10496.	69	0.	0	148.300	.833858	.664265	-2.21
12	38.33	10403.	72	0.	0	148.300	.818795	.640949	-2.33
13	30.00	12940.	74	0.	0	162.578	.801580	.617730	-2.47
14	21.67	12746.	77	0.	0	162.578	.779347	.591017	-2.51
15	13.33	13067.	80	0.	0	162.578	.754865	.564791	-2.54
16	5.00	13443.	82	0.	0	162.578	.728178	.539191	-2.53
17	-3.33	13786.	84	0.	0	162.578	.699305	.514416	-2.49
18	-11.67	14036.	87	0.	0	162.578	.668504	.490298	-2.48
19	-20.00	14143.	89	0.	0	162.578	.636184	.468453	-2.44
20	-28.33	14230.	91	0.	0	162.578	.602791	.442563	-2.37
21	-36.67	14149.	94	0.	0	162.578	.568097	.418309	-2.26
22	-45.00	14004.	96	0.	0	162.578	.531486	.393747	-2.06
23	-53.33	13714.	98	0.	0	162.578	.494418	.368300	-1.76
24	-61.67	13301.	101	0.	0	162.578	.456065	.343932	-1.64
25	-70.00	13070.	105	0.	0	162.578	.417424	.319103	-1.52
26	-78.69	12844.	108	0.	0	162.578	.376527	.292848	-1.42
27	-87.78	12354.	110	0.	0	162.578	.336952	.266736	-1.32
28	-96.67	11406.	109	0.	0	162.578	.298417	.240849	-1.21
29	-105.56	10942.	112	0.	0	162.578	.260653	.215631	-1.06
30	-114.44	10198.	116	0.	0	162.578	.224591	.191119	-.89
31	-123.33	9493.	118	0.	0	162.578	.193105	.168068	
32	-132.22	8549.	117	0.	0	162.578	.165508	.148846	
33	-141.11	6864.	119	0.	0	162.578	.141216	.128179	

PROB 2 36-IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN 060 HAMMER

OTIP=10, MINIMUM WALL THICKNESS=1.5 IN. MU = 35

TABLE 9 -- RESISTANCE-BLOW CURVE DATA

TIP RESISTANCE PERCENTAGE = 35.00

BLOWS/FT.	RESISTANCE DYNAMIC PT	MAX C STRESS	SEG	MAX T STRESS	SEG
TOTAL-TONS FORCE-TONS	LBS/SQ.IN. NO.	LBS/SQ.IN. NO.			
2.19	50.	51.19	14640.	5	9707.
3.14	100.	94.03	14620.	6	9428.
4.36	150.	140.45	14620.	6	7148.
5.96	200.	140.11	14620.	6	5960.
7.49	250.	216.15	14620.	6	5001.
9.41	300.	240.25	14620.	6	4320.
13.10	350.	279.67	14620.	6	3369.
14.42	400.	307.66	14620.	6	2430.
15.90	450.	333.43	14620.	6	1749.
17.55	500.	357.19	14620.	6	1174.
19.40	550.	379.09	14620.	6	751.
21.50	600.	399.31	14620.	6	0.
23.90	650.	417.97	14620.	6	0.
26.66	700.	435.17	14620.	6	0.
29.87	750.	450.96	14620.	6	0.
33.61	800.	465.08	14620.	6	0.
38.05	850.	478.77	14620.	6	0.
43.35	900.	490.99	14620.	6	0.
49.77	950.	502.36	14620.	6	0.
57.70	1000.	512.77	14620.	6	0.
67.65	1050.	521.95	14620.	6	0.
80.46	1100.	530.18	14620.	6	0.
97.42	1150.	537.31	14620.	6	0.
120.61	1200.	543.75	14620.	6	0.
153.96	1250.	549.79	14620.	6	0.
205.01	1300.	554.63	14620.	6	0.
291.15	1350.	567.94	14620.	6	0.
461.01	1400.	562.08	14620.	6	0.

PROB 2 36IN. DIAMETER PILES 3-PILE STRUCTURE
150FT PENETRATION -- VULCAN OAG HAMMER

OTPS-10, MINIMUM WALL THICKNESS 1.5 IN. RU = 35

TABLE-10 -- SPECIFIED HDW DATA

TYP RESISTANCE PERCENTAGE = 35.00

BLWS PER FOOT	RESISTANCE TONS
153.96	1250.
205.01	1300.
243.55	1326.
291.15	1350.

JYJOPNC. 04/20/74. *UNITED COMPUTING* 67. APY/SI. H.0.24

1A.08.14SPIL.CM100.71000.					
1A.08.14SFL	64	0.000			
1A.08.15SAC3000CRR0023.27771000C 3H					
1A.08.15. 04/20/74. JYJOPNC					
1A.08.15.PFL.40000.					
1A.08.16SFL	5392	0.001			
1A.08.16SFL	16384	0.001			
1A.08.16.PAP.DFF.					
1A.08.16SFL	256	0.001			
1A.08.16.GET.PT1H(CR00024)					
1A.08.19.READY = PILB					
1A.08.19SFL	4096	0.001	0	0.	
1A.08.19SFI	72	1			
1A.08.19.PILB.					
1A.08.19SFL00	16384	0.001			
1A.08.20SFL01	16384	0.119	190		6
1A.08.20.FL REQUIRED TO LOAD			363708 (-15608)		
1A.08.20.FL REQUIRED TO EXECUTE			300008 (14336)		
1A.08.20SFL	16384	0.143			
1A.08.49.END PILDRI					
1A.08.49.COST.					
1A.08.49SFL	14336	21.092	58		6
1A.08.50.		SERVICE UNITS	59.1		
1A.08.50.		JOB COSTS	14.77		
1A.08.50SFL	12288	21.111	7		5
1A.08.50.FXIT.					
1A.08.50SJT00	2368	21.111			
1A.08.50.		*CPU SEC. *DISC PRUS* DISC ACC			
1A.08.50.P.F. PRUS*P.F. ACC *TAPE PRUS* TAPE ACC					

A-3 LATERALLY LOADED PILE CAPACITY

100-270591-1016

15400 JHM ORIGIN FROM GROUP=0027 , DSPSCR , DEVICE=MM027H01, DAS
//LEC9011 JHM (000427050027771007LEC27011),IC,CHERN ,PRTY=4,CLASS=AC

// TIME=(005),REGIN=25AK

//MAIN LINES=(005,1),CLASS=(00,AC)

//JH01H DD DS=CCPR00,LIH03,DISP=SHR

// EXEC PG=STKX097

//PT06F001 DD SYSOUT=*

//PT05F001 DD *

LEC9011 IFF4037 LFC9011 STARTED TIME=14.13.41

LEC9011 IFF234E D BAH,ASPAH

*LEC9011 007 IECASPO BAH IS LEC9011 A P106F001

LEC9011 004 IECASPO 042 IS LEC9011 ASP10001

LEC9011 IFF202F K 042,019107,01,LEC9011,

LEC9011 TIME=LEC9011 CC=00402705 P=2777100 T J=LEC27011 N=FC,CHERN ABQ107

LEC9011 IFF404J LFC9011 ENDED TIME=14.05

//LECF9011 JHM (000427050027771007LEC27011),IC,CHERN ,PRTY=4,CLASS=AC

// TIME=(005),REGIN=25AK

//JH01H DD DS=CCPR00,LIH03,DISP=SHR

// EXEC PG=STKX097

//PT06F001 DD SYSOUT=*

//PT05F001 DD UNIT=(CIC,DEFER),DSNAME=ASPI0001,

// DISP=(OLD,DELETE),VOL=SER=019107,DCH=(LRECL=80,RLKSIZE=80,RECFM=FB)

//

IFF234J ALLC, FOR LFC9011

IFF237I 107 ALLOCATED TO JH01H

IFF237I 04H ALLOCATED TO PT06F001

IFF237I 042 ALLOCATED TO PT05F001

IFF142I - STEP WAS EXECUTED - COND CODE 0000

IFF245I DCPR00,LIH03 PASSED

IFF245I VOL SER NOS= DC5002.

IFF245I SVS76113,TIME312,RV001,LFC9011,ASPD001 DELETED

IFF245I VOL SER NOS= ASP04H.

IFF245I SVS76113,TIME312,RV001,LFC9011,ASPI0001 DELETED

IFF245I VOL SER NOS= 019107.

IFF373I STEP / / START 76113,1413

IFF374I STEP / / STOP 76113,1413 CPU 041M 01.33SEC STEP VIRT 100M

===== PACS DATA ACQUISITION SYSTEM =====

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PACES DATA ACQUISITION SYSTEM				
JOB LOG NUMBER =	LC9011	76113	18.13.40.86	
PROGRAMMER	C. CHERN			
ACCTG DATA	004427050327771000	LC9011		
JOHNAME	LC9011			
SYSTEM ID	54 = 50			
DATE	04/22/76	76.113	INITIATION TIME	18.13.40.86
CDL TIME	00.00.01.33		TERMINATION TIME	18.14.03.87
PRIORITY	02		ELAPSED TIME	00.00.23.01
CLASS	A		COMPLETION STATUS	00000

AD-A164 421

STRUCTURAL CONCEPT ANALYSIS REPORT FOR THE EAST COAST
AIR COMBAT MANEUVER. (U) CREST ENGINEERING INC TULSA OK
MAY 76 27-771-92-APP-C CHES/NAVFAC-FPO-7601-APP-C

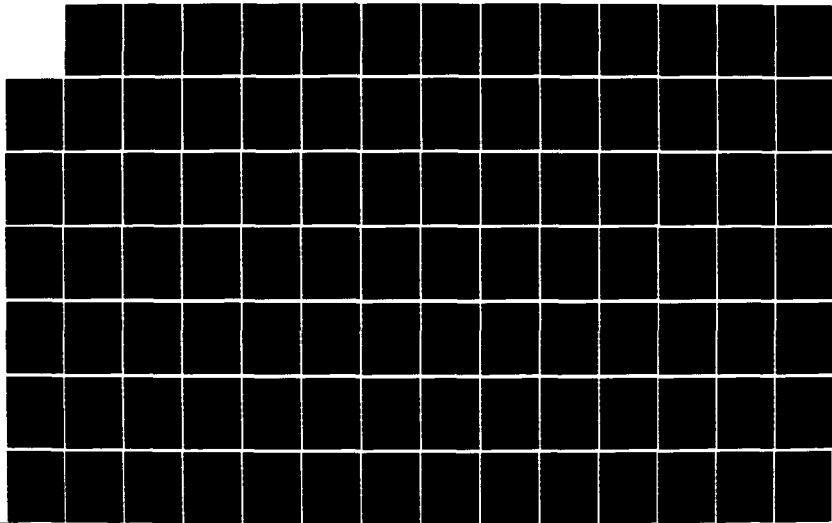
577

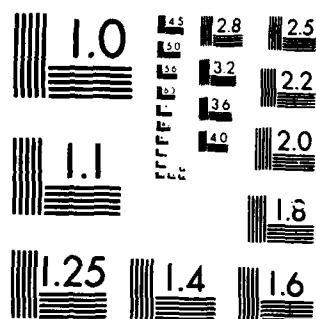
UNCLASSIFIED

NS2477-76-C-8179

F/G 13/13

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

LATERALLY LOADED PILE PROGRAM

HEAD COLUMN ANALYSIS USING RIGID LINK FINITE ELEMENT TECHNIQUES

NUMBER OF PROBLEMS IN SET = 1

GENERAL PROBLEM TITLE = 3-PILE ACAP STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

TABLE 1 • PROGRAM CONTROLS DATA FOR SWIM N(1). 1

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30

LIST OF WORKING STATIONS		
STATION	DATE	TIME
STATION 1	5	15
STATION 2	10	20
STATION 3	15	25
STATION 4	20	30
STATION 5	25	35
STATION 6	30	40
STATION 7	35	45
STATION 8	40	50
STATION 9	45	55
STATION 10	50	00

UNITED STATES GOVERNMENT

100

NUMBER OF INCENTIVES FOR
CALCULATE STRESSES (VFS = 1) (VIF = 0) 1

INCREMENT LENGTH = 0.360 02

WAXJUM AIRCRAFT DEFLECTION	0.1000 IN
DEFLECTION CONTIN	0.1000 IN

MODULUS OF ELASTICITY = 0.3000 05

200010 = SHILOVE FIELD

REF ID: A68904

TABLE 3 - SPECIFIED DEFLECTIONS AND SLOPES

STATION	CASE	DEFLECTION	SLOPE
			NONE SPECIFIED

TABLE 0A - PILE PROPERTIES

PROGRAM AUTOMATICALLY AVERAGES MOMENT UP INERTIA
AND AREA VALUES AT CHANGES IN A AND T THUS, T
VALUES FOR T1P AND MDT1P ELEMENTS ARE HALVED.

FROM STA.	T1P STA.	A
0	7	0.2770 05
7	40	0.2420 05
		0.1630 03

TABLE 4F - PILE LOADINGS

FROM TO CONT.	Q	S	T	R	P
0 0 0	0.5180 02	0.0	0.0	0.7330 07	0.0
0 0 1	0.0	0.0	0.0	0.0	0.1460 04
7 1 1	0.0	0.0	0.0	0.0	0.1260 04
33 1 1	0.0	0.0	0.0	0.0	0.8600 03
48 0 0	0.0	0.0	0.0	0.0	0.2000 02

PROGRAM ASSUMES LOADING OF TABLE 4H AND 5 IS APPLIED AS
CONCENTRATED LOADING AT INCREMENT POINTS. THEORETICAL SPRINGS
CONNECTING RIGID FINITE ELEMENTS ARE LOCATED AT INCREMENT POINTS.

TABLE 5 - MULTIPLIER LOAD AND SUPPORT CURVES

FROM TO CONT. MULTIPLIER TOTAL NO. OF POINTS SYMMETRY

0 1 -0.3000-01 0.1000-02 2 1

ACTUAL Q-W CURVE POINTS

0 0.3000 04 0.0 -0.3000 04

W -0.9900 02 -0.9900 02 0.9900 02 0.9900 02

FROM TO CONT. MULTIPLIER TOTAL NO. OF POINTS SYMMETRY

2 1 -0.3000-01 0.1000-02 2 1

ACTUAL Q-W CURVE POINTS

0 0.3000 04 0.0 -0.3000 04

W -0.9900 02 -0.9900 02 0.9900 02 0.9900 02

FROM TO CONT. MULTIPLIER TOTAL NO. OF POINTS SYMMETRY

3 1 -0.3000-01 0.1000-02 3 1

ACTUAL Q-W CURVE POINTS

0 0.4790 01 0.4790 01 0.4790 01 0.4320 01 0.3060 01

W -0.0000 02 -0.2000 02 -0.1130 01 -0.5000 00 -0.3000 00 -0.7000-01 -0.1600-01

0 -0.3060 01 -0.4320 01 -0.5220 01 -0.6060 01 -0.6790 01 -0.8790 01

W 0.1600-01 0.7000-01 0.3000-00 0.5000 00 0.1130 01 0.2000 02 0.9900 02

FROM TO CONT. MULTIPLIER TOTAL NO. OF POINTS SYMMETRY

5 1 -0.3000-01 0.1000-02 5 1

ACCEPTED FOR PUBLICATION

	0.2900 02	0.4900 02	0.6900 02	0.8900 02	0.4300 02	0.6300 02	0.8300 02	0.2070 02	0.7980 01
0.2900 02	-0.4900 02	-0.2000 02	-0.1130 01	-0.5000 00	-0.2900 00	-0.1700 00	-0.6300 01	-0.9000 02	
-0.7000 01	-0.2070 02	-0.3330 02	-0.4300 02	-0.5500 02	-0.4900 02	-0.6900 02	-0.8900 02		
0.9000 02	0.3300 01	0.1700 00	0.2900 00	0.5000 00	0.2900 00	0.1130 01	0.2000 02	0.9900 02	

EXHIBIT NO.	QUANTITY	TOTAL NO. OF POINTS	SYMMETRY
1	1	1	1
2	1	1	1
3	1	1	1
4	1	1	1
5	1	1	1
6	1	1	1
7	1	1	1
8	1	1	1
9	1	1	1
10	1	1	1
11	1	1	1
12	1	1	1
13	1	1	1
14	1	1	1
15	1	1	1
16	1	1	1
17	1	1	1
18	1	1	1
19	1	1	1
20	1	1	1
21	1	1	1
22	1	1	1
23	1	1	1
24	1	1	1
25	1	1	1
26	1	1	1
27	1	1	1
28	1	1	1
29	1	1	1
30	1	1	1
31	1	1	1
32	1	1	1
33	1	1	1
34	1	1	1
35	1	1	1
36	1	1	1
37	1	1	1
38	1	1	1
39	1	1	1
40	1	1	1
41	1	1	1
42	1	1	1
43	1	1	1
44	1	1	1
45	1	1	1
46	1	1	1
47	1	1	1
48	1	1	1
49	1	1	1
50	1	1	1
51	1	1	1
52	1	1	1
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66	1	1	1
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76	1	1	1
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88	1	1	1
89	1	1	1
90	1	1	1
91	1	1	1
92	1	1	1
93	1	1	1
94	1	1	1
95	1	1	1
96	1	1	1
97	1	1	1
98	1	1	1
99	1	1	1
100	1	1	1

7	-6.5000-0	1
8	0.1000-02	1

ACTUAL NEW CUMULATIVE SALES

0	0.1870 03	0.1870 03	0.1870 03	0.1170 03	0.9000 02	0.7110 02	0.4560 02	0.2200 02
.	-0.9000 02	-0.2000 02	-0.1130 01	-0.5000 00	-0.3000 00	-0.1800 00	-0.7100-01	-0.1700-01
0	-0.2200 02	-0.4560 02	-0.7110 02	-0.9000 02	-0.1170 03	-0.1870 03	-0.1870 03	-0.1870 03
	0.1700-01	0.7100-01	0.1800 00	0.3000 00	0.5000 00	0.1130 01	0.2000 02	0.9900 02

TERMS TO CONT. - QUALIFIER - TOTAL NO. OF PLANTS SYMMETRY

0.3000-05 0.1000-02

ACTUAL, DOWN CURVE - 1945

0	0.2090 03	0.2090 03	0.1310 03	0.1010 03	0.7880 02	0.4950 02	0.2180 02
1	-0.9990 02	-0.2090 02	-0.5090 00	-0.2900 00	-0.1700 00	-0.6800 01	-0.1200 01
2	-0.2180 02	-0.4950 02	-0.1010 03	-0.1310 03	-0.2090 03	-0.2090 03	-0.2090 03
3	0.1200 01	0.6800 01	0.2900 00	0.5000 00	0.1130 01	0.2000 02	0.9990 02

FROM THE CURVE. MULTIPLIER TOTAL NO. OF POINTS SYMMETRY

2	1	0.5000-01	0.1000-02	H	1
2	1	0.5000-01	0.1000-02	H	1

ACTUAL C-W CURVE PRINTS

0	0.4920 03	0.4920 03	0.4920 03	0.3070 03	0.2420 03	0.1940 03	0.1500 03	0.0970 02
-	-0.9990 02	-0.2000 02	-0.1130 01	-0.5000 00	-0.5000 00	-0.1900 00	-0.9000-01	-0.3800-01
+	-0.4970 02	-0.1500 04	-0.1940 03	-0.2420 03	-0.3070 03	-0.4920 03	-0.4920 03	-0.4920 03

+

0.3000-01 0.5000-00 0.1130 01 0.2000 02 0.9990 03

TOTAL NO. OF POINTS SYMMETRY

19 1 -0.3000-01 0.1000-02 8 1

ACTUAL G-W CURVE POINTS

0 0.7650 03 -0.7650 03 0.7650 03 0.3020 03 0.2100 03 0.1400 03
" -0.9990 02 -0.2000 02 -0.1130 01 -0.3000 00 -0.9000-01 -0.3000-01
0 -0.1400 03 -0.2100 03 -0.3020 03 -0.4780 03 -0.7650 03 -0.7650 03
" 0.3400-01 0.9000-01 0.1900 00 0.3000 00 0.1130 01 0.2000 02 0.9990 02

TOTAL NO. OF POINTS SYMMETRY

26 1 -0.3000-01 0.1000-02 8 1

ACTUAL G-W CURVE POINTS

0 0.1070 04 0.1070 04 0.1070 04 0.5250 03 0.4210 03 0.2920 03 0.1940 03
" -0.9990 02 -0.2000 02 -0.1130 01 -0.5000 00 -0.3000 00 -0.9000-01 -0.3000-01
0 -0.1940 03 -0.2920 03 -0.4210 03 -0.5250 03 -0.6660 03 -0.1070 04 -0.1070 04
" 0.3400-01 0.9000-01 0.1900 00 0.3000 00 0.5000 00 0.1130 01 0.2000 02 0.9990 02

TOTAL NO. OF POINTS SYMMETRY

49 1 -0.3000-01 0.1000-02 8 1

ACTUAL G-W CURVE POINTS

0 0.1990 04 0.1990 04 0.1990 04 0.1250 04 0.7880 03 0.5470 03 0.3640 03
" -0.9990 02 -0.2000 02 -0.1130 01 -0.5000 00 -0.3000 00 -0.9000-01 -0.3000-01
0 -0.3640 03 -0.5470 03 -0.7880 03 -0.9430 03 -0.1250 04 -0.1990 04 -0.1990 04
" 0.3400-01 0.9000-01 0.1900 00 0.3000 00 0.5000 00 0.1130 01 0.2000 02 0.9990 02

PROBLEM NUMBER = 1

PROBLEM DESCRIPTION = MUDLINE CONDITIONS VES1,AKIP RZ7327251 PW1460KIP TENSION

ITERATION MONITOR DATA

ITER. NUM.	DIFF CURVES	NO. STES. NOT CLOSED	5	10	15	20	30
1	NO	15	0.2490-01	-0.2990-02	0.2120-04	0.1610-04	0.9230-07
2	NO	9	0.4910-01	-0.1670-02	-0.1400-03	0.3530-04	0.1320-06
3	NO	9	0.5310-01	-0.3610-02	-0.1800-03	0.3880-04	0.1350-06
4	NO	0	0.5310-01	-0.3610-02	-0.1800-03	0.3880-04	0.1350-06

RESULTS

STA.	DIST. ALONG PILE	DEPL.	SLOPE	MOMENT	HEAVY COLUMN SHEAR	APPLIED NON LINEAR LATERAL LOADING	COMBINED STRESS(MAX.)
0	0.0	0.200	-0.6442E+03	-0.4750 04	50.635	0.0	10.854
1	36.000	0.170	-0.8145E+03	-0.2930 00	50.535	0.0	9.515
2	72.000	0.147	-0.9014E+03	-0.1110 00	50.535	0.0	8.181
3	108.000	0.114	-0.9140E+03	0.7150 03	48.209	-4.679	7.773
4	144.000	0.082	-0.8437E+03	0.2370 00	30.141	-13.607	8.695
5	180.000	0.053	-0.7160E+03	0.3530 04	23.354	-16.351	9.301
6	216.000	0.030	-0.5518E+03	0.4050 34	4.144	-20.684	9.484
7	252.000	0.013	-0.3757E+03	0.3850 04	-15.071	-18.058	9.833
8	288.000	0.003	-0.2130E+03	0.2960 04	-26.317	-4.841	9.838
9	324.000	-0.002	-0.9258E+01	0.1430 04	-26.770	3.630	8.977
10	360.000	-0.004	-3.1948E+04	0.1030 00	-21.280	7.209	8.216
11	396.000	-0.005	0.1647E+04	0.4000 03	-13.939	7.347	7.650
12	432.000	-0.002	3.2710E+04	0.3000 02	-7.595	5.716	7.281
13	468.000	-0.001	0.2460E+04	-0.1330 03	-2.735	3.611	7.262
14	504.000	-0.001	0.1719E+04	-0.1660 03	-0.049	1.774	7.193
15	540.000	-0.000	0.9683E+05	-0.1360 03	1.094	0.526	7.076
16	576.000	-0.000	0.4133E+15	-0.8740 02	1.277	-6.107	6.946
17	612.000	0.000	0.8624E+06	-0.4430 02	1.006	-0.384	6.819
18	648.000	0.000	-0.6114E+06	-0.1510 02	0.820	-0.381	6.703
19	684.000	0.000	-0.9741E+06	0.3160 00	0.290	-0.271	6.598
20	720.000	0.000	-0.8223E+06	0.6010 01	0.083	-0.150	6.508
21	756.000	0.000	-0.5167E+06	0.6510 01	-0.021	-0.059	6.413
22	792.000	0.000	-0.2447E+06	0.4500 01	-0.054	-0.007	6.318
23	828.000	-0.000	-0.7662E+07	0.2440 01	-0.044	0.015	6.222
24	864.000	-0.000	0.7392E+06	0.9450 00	-0.032	0.019	6.126
25	900.000	-0.000	0.3320E+07	0.1170 00	-0.016	0.014	6.031
26	936.000	-0.000	0.3151E+07	-0.2000 00	-0.005	0.008	5.937
27	972.000	-0.000	0.2026E+07	-0.2460 00	0.010	0.003	5.843
28	1008.000	-0.000	0.0667E+08	-0.1790 00	0.002	0.000	5.748
29	1044.000	0.000	0.2912E+08	-0.9470E+01	0.002	-0.001	5.654
30	1080.000	0.000	-0.2915E+09	-0.5451E+01	0.001	-0.001	5.559
31	1116.000	0.000	-0.1216E+08	-0.2830E+02	0.001	-0.001	5.465
32	1152.000	0.000	-0.3079E+08	0.8340E+02	0.000	-0.000	5.370
33	1188.000	0.000	-0.6490E+09	0.6970E+02	0.000	-0.000	5.276
34	1224.000	0.000	-0.2709E+09	0.5920E+02	-0.000	-0.000	4.933
35	1260.000	-0.000	-0.6540E+10	0.2810E+02	-0.000	0.000	4.589
36	1296.000	-0.000	0.2626E+10	0.8110E+03	-0.000	0.000	4.245
37	1332.000	-0.000	0.4372E+10	-0.1060E+03	-0.000	0.000	3.902
38	1368.000	-0.000	0.3253E+10	-0.3060E+03	-0.000	0.000	3.558
39	1404.000	-0.000	0.1683E+10	-0.2870E+03	0.000	0.000	3.215
40	1440.000	0.000	0.5730E+11	-0.1600E+03	0.000	-0.000	2.871
41	1476.000	0.000	0.2576E+12	-0.6670E+06	0.000	-0.000	2.528
42	1512.000	0.000	-0.1443E+11	-0.7700E+05	0.000	-0.000	2.184
43	1548.000	0.000	-0.1366E+11	0.3070E+04	-0.000	-0.000	1.840
44	1584.000	0.000	-0.8055E+12	0.3190E+04	-0.000	-0.000	1.497
45	1620.000	-0.000	-0.3253E+12	0.7490E+05	-0.000	0.000	1.153
46	1656.000	-0.000	-0.5870E+13	0.3270E+05	-0.000	0.000	0.810
47	1692.000	-0.000	0.4547E+13	0.4530E+06	-0.000	0.000	0.466
48	1728.000	-0.000	0.6492E+13	0.1481E+07	-0.000	0.000	0.061
49	1764.000	-0.000	0.6530E+13	-0.4190E+19	-0.000	0.000	-0.000

+

50	1400.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
51	1450.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
52	1500.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
53	1550.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
54	1600.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
55	1650.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
56	1700.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
57	1750.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
58	1800.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
59	1850.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
60	1900.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

USER SHOULD NOTE THAT SLIDE LISTED ABOVE IS RELATIVE TO SLOPE AT BOTTOM OF PILE
AND IS NOT TRUE SLIDE RELATIVE TO ORIGINAL PILE DEFLECTION.

USER SHOULD NOTE THAT BEAM COLUMN SHEAR LISTED IS THAT DUE TO BOTH LATERAL AND AXIAL EFFECTS
ALSO THAT APPLIED LATERAL LOADING IS TOTAL FOR ONE INCREMENT LENGTH

MOISTURES AND REACTIONS STORED FOR STIFFNESS COEFFICIENT DEVELOPMENT USE

DEFLECTIONS	ROTATIONS	MOMENTS	LATERAL SHEAR	AT STATION
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0.174420 00	-0.814550-03	-0.292540 04	0.518130 02	1
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USER SHOULD NOTE LATERAL SHEAR ABOVE IS THE SHEAR AT STATION.
SHEAR GIVEN IS PERPENDICULAR TO ORIGINAL UNDEFORMED MEMBER AXIS.

ASP JOB NO. = 0107

DATE = 76.114

//LEFC011 JOB (00042705002777)OUT(LEFC27011),C,CHERN 1,PTVEN,CLASS4,0107

ELAPSED TIME ON MAIN = 00.05, START TIME = 18.15.42

DDNAME = RVS5RG

DDNAME = ST06F001

LINES OUTPUT FOR THIS JOB = 000505

CARDS FROM MAIN FOR THIS JOB = NONE

PRINTED ON RVS27PRT, LINES = 000077

PRINTED ON RVS27PRT, LINES = 000428

A-4 WAVE AND WIND LOADS

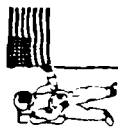


6000 REFERENCE

UNLIMITED COMPUTING. 67. APEX/SL. H.0.25

09.54.06. 04/27/76.

[illegible]



26	GRUP	RR4	BRACES4	1400	375	2900	1160	3600	2	243	A	A
27	GRUP	RR5	BRACES5	1275	500	2900	1160	3600	2	342	A	A
28	GRUP	RR6	BRACES6	1275	375	2900	1160	3600	2	342	A	A
29	GRUP	RR7	BRACES7	6,625	200	2900	1160	3600	2	314	A	A
30	GRUP	RR8	WISMAH8			2900	1160	3600	2			01
31	GRUP	STL	SUSTLEG	3600	1250	2900	1160	3600	1			01
32	GRUP	RR1	WISMAH1			2900	1160	3600	1			01
33	GRUP	RR2	WISMAH2			2900	1160	3600	1			01
34	GRUP	RR3	WISMAH3			2900	1160	3600	1			01
35	MEMBER		1	4	P10						F	0000 1
36	MEMBER		4	16	P10						F	0000 1
37	MEMBER		16	28	P20						F	0000 1
38	MEMBER		28	43	P20						F	0000 1
39	MEMBER		43	55	P20						F	0000 1
40	MEMBER		55	17	P10						F	0000 2
41	MEMBER		17	29	P20						F	0000 2
42	MEMBER		29	44	P20						F	0000 2
43	MEMBER		44	56	P20						F	0000 2
44	MEMBER		56	3	P10						F	0000 3
45	MEMBER		3	18	P10						F	0000 3
46	MEMBER		18	30	P20						F	0000 3
47	MEMBER		30	45	P20						F	0000 3
48	MEMBER		45	57	P20						F	0000 3
49	MEMBER		57	10	JL1						F	4000
50	MEMBER		10	22	JL1						F	4000
51	MEMBER		22	34	JL1						F	4000
52	MEMBER		34	40	JL2						F	4000
53	MEMBER		40	49	JL2						F	4000
54	MEMBER		49	55	JL2						F	4000
55	MEMBER		55	12	JL1						F	4000
56	MEMBER		12	24	JL1						F	4000
57	MEMBER		24	36	JL1						F	4000
58	MEMBER		36	41	JL2						F	4000
59	MEMBER		41	51	JL2						F	4000
60	MEMBER		51	56	JL2						F	4000
61	MEMBER		56	14	JL1						F	4000
62	MEMBER		14	26	JL1						F	4000
63	MEMBER		26	38	JL1						F	4000
64	MEMBER		38	42	JL2						F	4000
65	MEMBER		42	53	JL2						F	4000
66	MEMBER		53	57	JL2						F	4000
67	MEMBER		57	10	RR2						F	1800
68	MEMBER		10	11	RR2						F	1800
69	MEMBER		11	12	RR2						F	1800
70	MEMBER		12	13	RR2						F	1800
71	MEMBER		13	14	RR2						F	1800
72	MEMBER		14	15	RR2						F	1800
73	MEMBER		15	16	RR2						F	1800
74	MEMBER		16	17	RR2						F	1800
75	MEMBER		17	18	RR2						F	1800
76	MEMBER		18	19	RR2						F	1800
77	MEMBER		19	20	RR2						F	1800
78	MEMBER		20	21	RR2						F	1800
79	MEMBER		21	22	RR2						F	1800
80	MEMBER		22	23	RR2						F	1800
81	MEMBER		23	24	RR2						F	1800



82	MEMBER	25	27	RR4	1400
83	MEMBER	27	28	RR4	1400
84	MEMBER	34	35	RR5	1275
85	MEMBER	35	36	RR5	1275
86	MEMBER	36	37	RR5	1275
87	MEMBER	37	38	RR5	1275
88	MEMBER	38	39	RR5	1275
89	MEMBER	39	40	RR5	1275
90	MEMBER	35	37	RR6	1275
91	MEMBER	37	39	RR6	1275
92	MEMBER	39	41	RR6	1275
93	MEMBER	49	50	RR1	1600
94	MEMBER	50	51	RR1	1600
95	MEMBER	51	52	RR1	1600
96	MEMBER	52	53	RR1	1600
97	MEMBER	53	54	RR1	1600
98	MEMBER	54	55	RR1	1600
99	MEMBER	50	52	RR5	1275
100	MEMBER	52	54	RR5	1275
101	MEMBER	54	56	RR5	1275
102	MEMBER	11	22	RR3	1600
103	MEMBER	11	24	RR3	1600
104	MEMBER	13	26	RR3	1600
105	MEMBER	13	26	RR3	1600
106	MEMBER	15	26	RR3	1600
107	MEMBER	15	22	RR3	1600
108	MEMBER	22	34	RR1	2000
109	MEMBER	24	34	RR1	2000
110	MEMBER	24	34	RR1	2000
111	MEMBER	36	49	RR1	2000
112	MEMBER	38	51	RR1	2000
113	MEMBER	34	53	RR1	2000
114	MEMBER	4	7	RR1	2000
115	MEMBER	7	10	RR1	2000
116	MEMBER	5	8	RR1	2000
117	MEMBER	8	12	RR1	2000
118	MEMBER	6	9	RR1	2000
119	MEMBER	9	14	RR1	2000
120	MEMBER	16	19	RR1	2000
121	MEMBER	19	22	RR1	2000
122	MEMBER	17	20	RR1	2000
123	MEMBER	20	24	RR1	2000
124	MEMBER	14	21	RR1	2000
125	MEMBER	21	24	RR1	2000
126	MEMBER	24	31	RR1	2000
127	MEMBER	31	34	RR1	2000
128	MEMBER	29	32	RR1	2000
129	MEMBER	32	36	RR1	2000
130	MEMBER	30	35	RR1	2000
131	MEMBER	33	34	RR1	2000
132	MEMBER	43	45	RR1	2000
133	MEMBER	46	49	RR1	2000
134	MEMBER	40	47	RR1	2000
135	MEMBER	47	51	RR1	2000
136	MEMBER	45	44	RR1	2000
137	MEMBER	44	53	RR1	2000



138	MEMBER	55	5A	STL	3600
139	MEMBER	5A	61	STL	3600
140	MEMBER	61	71	STL	3600
141	MEMBER	56	59	STL	3600
142	MEMBER	59	64	STL	3600
143	MEMBER	64	72	STL	3600
144	MEMBER	57	60	STL	3600
145	MEMBER	60	71	STL	3600
146	MEMBER	70	67	STL	3600
147	MEMBER	67	76	STL	3600
148	MEMBER	76	75	STL	3600
149	MEMBER	5A	59	RR5	1275
150	MEMBER	59	60	RR5	1275
151	MEMBER	60	5A	RR5	1275
152	MEMBER	59	61	RR5	1275
153	MEMBER	60	64	RR5	1275
154	MEMBER	6A	67	RR5	1275
155	MEMBER	70	69	RR7	6425
156	MEMBER	70	6A	RR7	6425
157	MEMBER	76	77	RR6	1275
158	MEMBER	76	7A	RR6	1275
159	MEMBER	61	62	W1A	0000
160	MEMBER	62	63	W1A	0000
161	MEMBER	63	64	W1A	0000
162	MEMBER	64	65	W1A	0000
163	MEMBER	65	67	W1A	0000
164	MEMBER	67	69	W1A	0000
165	MEMBER	69	61	W1A	0000
166	MEMBER	63	65	W0A	0000
167	MEMBER	65	6A	W1A	0000
168	MEMBER	66	67	W0B	0000
169	MEMBER	67	6A	W0A	0000
170	MEMBER	68	69	W0A	0000
171	MEMBER	69	62	W1A	0000
172	MEMBER	71	73	W1A	0000
173	MEMBER	71	72	W1A	0000
174	MEMBER	72	74	W1A	0000
175	MEMBER	71	61	W1A	0000
176	MEMBER	71	77	W1A	0000
177	MEMBER	77	63	W1A	0000
178	MEMBER	72	82	W1A	0000
179	MEMBER	72	78	W1A	0000
180	MEMBER	7A	64	W1A	0000
181	MEMBER	77	79	W1A	0000
182	MEMBER	77	75	W1A	0000
183	MEMBER	75	7A	W1A	0000
184	MEMBER	7A	60	W1A	0000
185	MEMBER	71	75	W0B	0000
186	MEMBER	72	75	W0B	0000
187	JOINT	1	2987	-1725	-600
188	JOINT	2	-29A7	-1725	-600
189	JOINT	3	000	3449	-600
190	JOINT	4	2910	-1684	0
191	JOINT	5	-2910	-1684	0
192	JOINT	6	0	3559	0
193	JOINT				

111 PILING A
111 PILING B
111 PILING C
W01 JNE
W01 JNE
W01 JNE



194	JOINT	7	2900	-1924	0	MIDLINE
195	JOINT	8	-2900	-1924	0	MIDLINE
196	JOINT	9	0	3599	0	MIDLINE
197	JOINT	10	2900	-1674	0	MIDLINE
198	JOINT	11	0	-1674	0	MIDLINE
199	JOINT	12	-29	-1674	0	MIDLINE
200	JOINT	13	-1450	837	0	MIDLINE
201	JOINT	14	0	3549	0	MIDLINE
202	JOINT	15	1450	837	0	MIDLINE
203	JOINT	16	2447	-1417	3200	1 LEVEL
204	JOINT	17	-2447	-1417	3200	1 LEVEL
205	JOINT	18	0	2425	3200	1 LEVEL
206	JOINT	19	2434	-1657	3200	1 LEVEL
207	JOINT	20	-2434	-1657	3200	1 LEVEL
208	JOINT	21	0	3065	3200	1 LEVEL
209	JOINT	22	2434	-1407	3200	1 LEVEL
210	JOINT	23	0	-1407	3200	1 LEVEL
211	JOINT	24	-2434	-1407	3200	1 LEVEL
212	JOINT	25	-1219	704	3200	1 LEVEL
213	JOINT	26	0	2815	3200	1 LEVEL
214	JOINT	27	1219	704	3200	1 LEVEL
215	JOINT	28	1987	-1151	6400	2 LEVEL
216	JOINT	29	-1987	-1151	6400	2 LEVEL
217	JOINT	30	0	3037	6400	2 LEVEL
218	JOINT	31	1977	-1391	6400	2 LEVEL
219	JOINT	32	-1977	-1391	6400	2 LEVEL
220	JOINT	33	0	3677	6400	2 LEVEL
221	JOINT	34	1977	-1141	6400	2 LEVEL
222	JOINT	35	0	-1141	6400	2 LEVEL
223	JOINT	36	-1977	-1141	6400	2 LEVEL
224	JOINT	37	-984	571	6400	2 LEVEL
225	JOINT	38	0	3427	6400	2 LEVEL
226	JOINT	39	984	571	6400	2 LEVEL
227	JOINT	40	1774	-1040	7800	HOAT LOG
228	JOINT	41	-1774	-1040	7800	HOAT LOG
229	JOINT	42	0	2880	7800	HOAT LOG
230	JOINT	43	1525	-885	9600	3 LEVEL
231	JOINT	44	-1525	-885	9600	3 LEVEL
232	JOINT	45	0	1759	9600	3 LEVEL
233	JOINT	46	1515	-1125	9600	3 LEVEL
234	JOINT	47	-1515	-1125	9600	3 LEVEL
235	JOINT	48	0	1999	9600	3 LEVEL
236	JOINT	49	1515	-875	9600	3 LEVEL
237	JOINT	50	0	-875	9600	3 LEVEL
238	JOINT	51	-1515	-875	9600	3 LEVEL
239	JOINT	52	-757	437	9600	3 LEVEL
240	JOINT	53	0	1749	9600	3 LEVEL
241	JOINT	54	757	437	9600	3 LEVEL
242	JOINT	55	1450	-837	10050	4P LEVEL
243	JOINT	56	-1450	-837	10050	4P LEVEL
244	JOINT	57	0	1674	10050	4P LEVEL
245	JOINT	58	1450	-837	12900	ST H-ACF
246	JOINT	59	-1450	-837	12900	ST H-ACF
247	JOINT	60	0	1674	12900	ST H-ACF
248	JOINT	61	1450	-837	14000	FOT TACK
249	JOINT	62	1000	-837	14000	FOT TACK



FOT OFCK
FOT OFCK
FOT OFCK
FOT OFCK
FOT OFCK
FOT OFCK
FOT OFCK
TNP OFCK
TNP OFCK
TNP OFCK
TNP OFCK
HPACE PT
TNP OFCK
TNP OFCK
TNP OFCK
TNP OFCK

250	JOINT	63	-1000	-837	14000
251	JOINT	64	-1050	-837	14000
252	JOINT	65	-1000	-087	14000
253	JOINT	66	-1000	1674	14000
254	JOINT	67	0	1674	14000
255	JOINT	68	1000	1674	14000
256	JOINT	69	1000	-087	14000
257	JOINT	70	0	1674	13500
258	JOINT	71	1450	-837	15900
259	JOINT	72	-1450	-837	15900
260	JOINT	73	1750	-837	15900
261	JOINT	74	-1750	-837	15900
262	JOINT	75	0	1674	15900
263	JOINT	76	0	1674	14800
264	JOINT	77	1450	1674	15900
265	JOINT	78	-1450	1674	15900
266	JOINT	79	1750	1674	15900
267	JOINT	80	-1750	1674	15900
268	JOINT	81	1450	-1337	15900
269	JOINT	82	-1450	-1337	15900
270	JOINT	83	1450	2174	15900
271	JOINT	84	-1450	2174	15900

[illegible]

274	LOAD	Y	43	55	4.08	345	
275	LOAD	X	43	55			1
276	LOAD	Y	44	56	4.08	345	48
277	LOAD	X	44	56			04
278	LOAD	Y	45	57	4.07	345	50
279	LOAD	X	45	57			04
280	LOAD	Y	43	55	4.08	1111	53
281	LOAD	X	43	55			04
282	LOAD	Y	44	56	4.08	1111	50
283	LOAD	X	44	56			04
284	LOAD	Y	45	57	4.07	1111	1
285	LOAD	X	45	57			48
286	LOAD	Y	10	22	0.00	1	04
287	LOAD	Y	10	22	0.00	47	50
288	LOAD	Z	10	22	0.00	04	04
289	LOAD	X	10	22	10.81	1	50
290	LOAD	Y	10	22	10.81	48	04
291	LOAD	Z	10	22	10.81	04	1
292	LOAD	X	10	22	21.63	1	53
293	LOAD	Y	10	22	21.63	50	04
294	LOAD	Z	10	22	21.63	04	1
295	LOAD	X	22	34	0.00	1	57
296	LOAD	Y	22	34	0.00	53	04
297	LOAD	Z	22	34	0.00	04	1
298	LOAD	X	22	34	10.81	1	64
299	LOAD	Y	22	34	10.81	57	04
300	LOAD	Z	22	34	10.81	04	1
301	LOAD	X	22	34	21.63	1	71
302	LOAD	Y	22	34	21.63	64	04
303	LOAD	Z	22	34	21.63	04	1
304	LOAD	X	34	40	0.00	1	77
305	LOAD	Y	34	40	0.00	73	1
306	LOAD	Z	34	40	0.00	47	1



306	LOAD	Z	34	40	0.00-	05	4.73-	05	GL04	UNIF	WV	0	1
307	LOAD	X	34	40	4.73	1	4.73	1	GL04	UNIF	WV	0	1
308	LOAD	Y	34	40	4.73	77	4.73	82	GL04	UNIF	WV	0	1
309	LOAD	Z	34	40	4.73-	05	4.73-	06	GL04	UNIF	WV	0	1
310	LOAD	X	34	40	9.45	1	4.73	44	GL04	UNIF	WV	0	1
311	LOAD	Y	34	40	9.45	82	4.73	44	GL04	UNIF	WV	0	1
312	LOAD	Z	34	40	9.45-	04	4.73-	06	GL04	UNIF	WV	0	1
313	LOAD	X	40	49	0.00	1	6.09	1	GL04	UNIF	WV	0	1
314	LOAD	Y	40	49	0.00	84	6.09	96	GL04	UNIF	WV	0	1
315	LOAD	Z	40	49	0.00-	04	6.09-	09	GL04	UNIF	WV	0	1
316	LOAD	X	40	49	6.09	1	6.09	1	GL04	UNIF	WV	0	1
317	LOAD	Y	40	49	6.09	96	6.09	106	GL04	UNIF	WV	0	1
318	LOAD	Z	40	49	6.09-	09	6.09-	09	GL04	UNIF	WV	0	1
319	LOAD	X	40	49	12.17	1	6.09	1	GL04	UNIF	WV	0	1
320	LOAD	Y	40	49	12.17	102	6.09	118	GL04	UNIF	WV	0	1
321	LOAD	Z	40	49	12.17-	09	6.09-	11	GL04	UNIF	WV	0	1
322	LOAD	X	49	55	0.00	1	1.52	1	GL04	UNIF	WV	0	1
323	LOAD	Y	49	55	0.00	114	1.52	121	GL04	UNIF	WV	0	1
324	LOAD	Z	49	55	0.00-	10	1.52-	10	GL04	UNIF	WV	0	1
325	LOAD	X	49	55	1.52	1	1.52	1	GL04	UNIF	WV	0	1
326	LOAD	Y	49	55	1.52	121	1.52	125	GL04	UNIF	WV	0	1
327	LOAD	Z	49	55	1.52-	10	1.52-	10	GL04	UNIF	WV	0	1
328	LOAD	X	49	55	3.04	1	1.52	1	GL04	UNIF	WV	0	1
329	LOAD	Y	49	55	3.04	125	1.52	128	GL04	UNIF	WV	0	1
330	LOAD	Z	49	55	3.04-	10	1.52-	11	GL04	UNIF	WV	0	1
331	LOAD	X	12	24	0.00-	1	10.81-	1	GL04	UNIF	WV	0	1
332	LOAD	Y	12	24	0.00	47	10.81	48	GL04	UNIF	WV	0	1
333	LOAD	Z	12	24	0.00-	04	10.81-	04	GL04	UNIF	WV	0	1
334	LOAD	X	12	24	10.81-	1	10.81-	1	GL04	UNIF	WV	0	1
335	LOAD	Y	12	24	10.81	48	10.81	50	GL04	UNIF	WV	0	1
336	LOAD	Z	12	24	10.81-	04	10.81-	04	GL04	UNIF	WV	0	1
337	LOAD	X	12	24	21.63-	1	10.81-	1	GL04	UNIF	WV	0	1
338	LOAD	Y	12	24	21.63	50	10.81	53	GL04	UNIF	WV	0	1
339	LOAD	Z	12	24	21.63-	04	10.81-	04	GL04	UNIF	WV	0	1
340	LOAD	X	24	36	0.00-	1	10.81-	1	GL04	UNIF	WV	0	1
341	LOAD	Y	24	36	0.00	53	10.81	57	GL04	UNIF	WV	0	1
342	LOAD	Z	24	36	0.00-	04	10.81-	05	GL04	UNIF	WV	0	1
343	LOAD	X	24	36	10.81-	1	10.81-	1	GL04	UNIF	WV	0	1
344	LOAD	Y	24	36	10.81	57	10.81	64	GL04	UNIF	WV	0	1
345	LOAD	Z	24	36	10.81-	05	10.81-	05	GL04	UNIF	WV	0	1
346	LOAD	X	24	36	21.63-	1	10.81-	1	GL04	UNIF	WV	0	1
347	LOAD	Y	24	36	21.63	64	10.81	71	GL04	UNIF	WV	0	1
348	LOAD	Z	24	36	21.63-	05	10.81-	06	GL04	UNIF	WV	0	1
349	LOAD	X	36	41	0.00-	1	4.73-	1	GL04	UNIF	WV	0	1
350	LOAD	Y	36	41	0.00	73	4.73	77	GL04	UNIF	WV	0	1
351	LOAD	Z	36	41	0.00-	05	4.73-	05	GL04	UNIF	WV	0	1
352	LOAD	X	36	41	4.73-	1	4.73-	1	GL04	UNIF	WV	0	1
353	LOAD	Y	36	41	4.73	77	4.73	82	GL04	UNIF	WV	0	1
354	LOAD	Z	36	41	4.73-	05	4.73-	06	GL04	UNIF	WV	0	1
355	LOAD	X	36	41	9.45-	1	4.73-	1	GL04	UNIF	WV	0	1
356	LOAD	Y	36	41	9.45	82	4.73	84	GL04	UNIF	WV	0	1
357	LOAD	Z	36	41	9.45-	06	4.73-	06	GL04	UNIF	WV	0	1
358	LOAD	X	41	51	0.00-	1	6.09-	1	GL04	UNIF	WV	0	1
359	LOAD	Y	41	51	0.00	84	6.09	96	GL04	UNIF	WV	0	1
360	LOAD	Z	41	51	0.00-	04	6.09-	09	GL04	UNIF	WV	0	1
361	LOAD	X	41	51	6.09-	1	6.09-	1	GL04	UNIF	WV	0	1



362	LOAD	Y	41	51	6.09	96	9.09	101	GLOR UNIF	AV	0	1
363	LOAD	Z	41	51	6.09	99	6.09	99	GLOR UNIF	AV	0	1
364	LOAD	X	41	51	12.17	1	6.09	1	GLOR UNIF	AV	0	1
365	LOAD	Y	41	51	12.17	106	6.09	114	GLOR UNIF	AV	0	1
366	LOAD	Z	41	51	12.17	99	6.09	11	GLOR UNIF	AV	0	1
367	LOAD	X	51	56	0.00	1	1.52	1	GLOR UNIF	AV	0	1
368	LOAD	Y	51	56	0.00	118	1.52	121	GLOR UNIF	AV	0	1
369	LOAD	Z	51	56	0.00	10	1.52	10	GLOR UNIF	AV	0	1
370	LOAD	X	51	56	1.52	1	1.52	1	GLOR UNIF	AV	0	1
371	LOAD	Y	51	56	1.52	121	1.52	125	GLOR UNIF	AV	0	1
372	LOAD	Z	51	56	1.52	10	1.52	10	GLOR UNIF	AV	0	1
373	LOAD	X	51	56	3.04	1	1.52	1	GLOR UNIF	AV	0	1
374	LOAD	Y	51	56	3.04	125	1.52	128	GLOR UNIF	AV	0	1
375	LOAD	Z	51	56	3.04	10	1.52	11	GLOR UNIF	AV	0	1
376	LOAD	Y	14	26	0.00	50	10.81	51	GLOR UNIF	AV	0	1
377	LOAD	Z	14	26	0.00	08	10.81	08	GLOR UNIF	AV	0	1
378	LOAD	Y	14	26	10.81	51	10.81	53	GLOR UNIF	AV	0	1
379	LOAD	Z	14	26	10.81	04	10.81	09	GLOR UNIF	AV	0	1
380	LOAD	Y	14	26	21.63	53	10.81	56	GLOR UNIF	AV	0	1
381	LOAD	Z	14	26	21.63	09	10.81	09	GLOR UNIF	AV	0	1
382	LOAD	Y	26	38	0.00	55	10.86	59	GLOR UNIF	AV	0	1
383	LOAD	Z	26	38	0.00	11	10.86	11	GLOR UNIF	AV	0	1
384	LOAD	Y	26	38	10.86	59	10.86	64	GLOR UNIF	AV	0	1
385	LOAD	Z	26	38	10.86	11	10.86	12	GLOR UNIF	AV	0	1
386	LOAD	Y	26	38	21.72	64	10.86	70	GLOR UNIF	AV	0	1
387	LOAD	Z	26	38	21.72	12	10.86	13	GLOR UNIF	AV	0	1
388	LOAD	Y	38	42	0.00	65	5.01	69	GLOR UNIF	AV	0	1
389	LOAD	Z	38	42	0.00	25	5.01	27	GLOR UNIF	AV	0	1
390	LOAD	Y	38	42	5.01	69	5.01	73	GLOR UNIF	AV	0	1
391	LOAD	Z	38	42	5.01	27	5.01	29	GLOR UNIF	AV	0	1
392	LOAD	Y	38	42	10.02	73	5.01	78	GLOR UNIF	AV	0	1
393	LOAD	Z	38	42	10.02	29	5.01	31	GLOR UNIF	AV	0	1
394	LOAD	Y	42	53	0.00	65	7.09	71	GLOR UNIF	AV	0	1
395	LOAD	Z	42	53	0.00	41	7.09	45	GLOR UNIF	AV	0	1
396	LOAD	Y	42	53	7.09	71	7.09	72	GLOR UNIF	AV	0	1
397	LOAD	Z	42	53	7.09	45	7.09	49	GLOR UNIF	AV	0	1
398	LOAD	Y	42	53	14.17	79	7.09	88	GLOR UNIF	AV	0	1
399	LOAD	Z	42	53	14.17	49	7.09	55	GLOR UNIF	AV	0	1
400	LOAD	Y	53	57	0.00	120	1.52	123	GLOR UNIF	AV	0	1
401	LOAD	Z	53	57	0.00	20	1.52	20	GLOR UNIF	AV	0	1
402	LOAD	Y	53	57	1.52	123	1.52	124	GLOR UNIF	AV	0	1
403	LOAD	Z	53	57	1.52	20	1.52	21	GLOR UNIF	AV	0	1
404	LOAD	Y	53	57	3.04	126	1.52	129	GLOR UNIF	AV	0	1
405	LOAD	Z	53	57	3.04	21	1.52	21	GLOR UNIF	AV	0	1
406	LOAD	Y	10	11	0.00	21	9.67	21	GLOR UNIF	AV	0	1
407	LOAD	Z	10	11	9.67	21	9.67	21	GLOR UNIF	AV	0	1
408	LOAD	Y	10	11	19.33	21	9.67	21	GLOR UNIF	AV	0	1
409	LOAD	Z	11	12	0.00	21	9.67	21	GLOR UNIF	AV	0	1
410	LOAD	Y	11	12	9.67	21	9.67	21	GLOR UNIF	AV	0	1
411	LOAD	Z	11	12	19.33	21	9.67	21	GLOR UNIF	AV	0	1
412	LOAD	Y	12	13	0.00	09	9.67	09	GLOR UNIF	AV	0	1
413	LOAD	Z	12	13	0.00	05	9.67	05	GLOR UNIF	AV	0	1
414	LOAD	Y	12	13	9.67	09	9.67	10	GLOR UNIF	AV	0	1
415	LOAD	Z	12	13	9.67	05	9.67	05	GLOR UNIF	AV	0	1
416	LOAD	Y	12	13	19.33	10	9.67	10	GLOR UNIF	AV	0	1
417	LOAD	Z	12	13	19.33	06	9.67	06	GLOR UNIF	AV	0	1



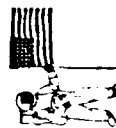
418	LOAD	X	13	14	0.00-	10	9.67-	10	9.67-	10	9.67-	GL08	UNIF	AV	0	1
419	LOAD	X	13	14	0.00	06	9.67	06	9.67	06	9.67	GL08	UNIF	AV	0	1
420	LOAD	X	13	14	9.67-	10	9.67-	10	9.67-	10	9.67-	GL08	UNIF	AV	0	1
421	LOAD	X	13	14	9.67	06	9.67	06	9.67	06	9.67	GL08	UNIF	AV	0	1
422	LOAD	X	13	14	19.34-	10	9.67-	10	9.67-	10	9.67-	GL08	UNIF	AV	0	1
423	LOAD	X	13	14	19.34	04	9.67	04	9.67	04	9.67	GL08	UNIF	AV	0	1
424	LOAD	X	14	15	0.00	10	9.67	10	9.67	10	9.67	GL08	UNIF	AV	0	1
425	LOAD	X	14	15	0.00	06	9.67	06	9.67	06	9.67	GL08	UNIF	AV	0	1
426	LOAD	X	14	15	9.67	10	9.67	10	9.67	10	9.67	GL08	UNIF	AV	0	1
427	LOAD	X	14	15	9.67	06	9.67	06	9.67	06	9.67	GL08	UNIF	AV	0	1
428	LOAD	X	14	15	19.34	10	9.67	10	9.67	10	9.67	GL08	UNIF	AV	0	1
429	LOAD	X	14	15	19.34	04	9.67	04	9.67	04	9.67	GL08	UNIF	AV	0	1
430	LOAD	X	15	16	0.00	10	9.67	10	9.67	10	9.67	GL08	UNIF	AV	0	1
431	LOAD	X	15	16	0.00	06	9.67	06	9.67	06	9.67	GL08	UNIF	AV	0	1
432	LOAD	X	15	16	9.67	10	9.67	10	9.67	10	9.67	GL08	UNIF	AV	0	1
433	LOAD	X	15	16	9.67	06	9.67	06	9.67	06	9.67	GL08	UNIF	AV	0	1
434	LOAD	X	15	16	19.33	00	9.67	00	9.67	00	9.67	GL08	UNIF	AV	0	1
435	LOAD	X	15	16	19.33	05	9.67	05	9.67	05	9.67	GL08	UNIF	AV	0	1
436	LOAD	X	11	13	0.00	07	9.67	07	9.67	07	9.67	GL08	UNIF	AV	0	1
437	LOAD	X	11	13	0.00	04	9.67	04	9.67	04	9.67	GL08	UNIF	AV	0	1
438	LOAD	X	11	13	9.67	07	9.67	07	9.67	07	9.67	GL08	UNIF	AV	0	1
439	LOAD	X	11	13	9.67	04	9.67	04	9.67	04	9.67	GL08	UNIF	AV	0	1
440	LOAD	X	11	13	19.33	04	9.67	04	9.67	04	9.67	GL08	UNIF	AV	0	1
441	LOAD	X	11	13	19.33	04	9.67	04	9.67	04	9.67	GL08	UNIF	AV	0	1
442	LOAD	X	13	15	0.00	18	9.67	18	9.67	18	9.67	GL08	UNIF	AV	0	1
443	LOAD	X	13	15	9.67	18	9.67	18	9.67	18	9.67	GL08	UNIF	AV	0	1
444	LOAD	X	13	15	19.33	18	9.67	18	9.67	18	9.67	GL08	UNIF	AV	0	1
445	LOAD	X	15	11	0.00-	04	9.67-	04	9.67-	04	9.67-	GL08	UNIF	AV	0	1
446	LOAD	X	15	11	0.00	04	9.67	04	9.67	04	9.67	GL08	UNIF	AV	0	1
447	LOAD	X	15	11	9.67-	04	9.67-	04	9.67-	04	9.67-	GL08	UNIF	AV	0	1
448	LOAD	X	15	11	9.67	04	9.67	04	9.67	04	9.67	GL08	UNIF	AV	0	1
449	LOAD	X	15	11	19.33-	07	9.67-	07	9.67-	07	9.67-	GL08	UNIF	AV	0	1
450	LOAD	X	15	11	19.33	04	9.67	04	9.67	04	9.67	GL08	UNIF	AV	0	1
451	LOAD	X	22	23	0.00	24	8.13	24	8.13	24	8.13	GL08	UNIF	AV	0	1
452	LOAD	X	22	23	8.13	24	8.13	24	8.13	24	8.13	GL08	UNIF	AV	0	1
453	LOAD	X	22	23	16.25	24	8.13	24	8.13	24	8.13	GL08	UNIF	AV	0	1
454	LOAD	X	23	24	0.00	24	8.13	24	8.13	24	8.13	GL08	UNIF	AV	0	1
455	LOAD	X	23	24	8.13	24	8.13	24	8.13	24	8.13	GL08	UNIF	AV	0	1
456	LOAD	X	23	24	16.25	24	8.13	24	8.13	24	8.13	GL08	UNIF	AV	0	1
457	LOAD	X	24	25	0.00-	10	8.13-	10	8.13-	10	8.13-	GL08	UNIF	AV	0	1
458	LOAD	X	24	25	0.00	06	8.13	06	8.13	06	8.13	GL08	UNIF	AV	0	1
459	LOAD	X	24	25	8.13-	11	8.13-	11	8.13-	11	8.13-	GL08	UNIF	AV	0	1
460	LOAD	X	24	25	8.13	06	8.13	06	8.13	06	8.13	GL08	UNIF	AV	0	1
461	LOAD	X	24	25	16.25-	11	8.13-	11	8.13-	11	8.13-	GL08	UNIF	AV	0	1
462	LOAD	X	24	25	16.25	06	8.13	06	8.13	06	8.13	GL08	UNIF	AV	0	1
463	LOAD	X	25	26	0.00-	11	8.13-	11	8.13-	11	8.13-	GL08	UNIF	AV	0	1
464	LOAD	X	25	26	0.00	06	8.13	06	8.13	06	8.13	GL08	UNIF	AV	0	1
465	LOAD	X	25	26	8.13-	11	8.13-	11	8.13-	11	8.13-	GL08	UNIF	AV	0	1
466	LOAD	X	25	26	8.13	06	8.13	06	8.13	06	8.13	GL08	UNIF	AV	0	1
467	LOAD	X	25	26	16.25-	11	8.13-	11	8.13-	11	8.13-	GL08	UNIF	AV	0	1
468	LOAD	X	25	26	16.25	06	8.13	06	8.13	06	8.13	GL08	UNIF	AV	0	1
469	LOAD	X	26	27	0.00	11	8.13	11	8.13	11	8.13	GL08	UNIF	AV	0	1
470	LOAD	X	26	27	0.00	06	8.13	06	8.13	06	8.13	GL08	UNIF	AV	0	1
471	LOAD	X	26	27	8.13	11	8.13	11	8.13	11	8.13	GL08	UNIF	AV	0	1
472	LOAD	X	26	27	8.13	06	8.13	06	8.13	06	8.13	GL08	UNIF	AV	0	1
473	LOAD	X	26	27	16.25	11	8.13	11	8.13	11	8.13	GL08	UNIF	AV	0	1



474	LOAD	Y	26	27	16.25	06	A.13	06	GLOR	UNIT	AV	0	1
475	LOAD	Y	27	22	0.00	11	A.13	11	GLOR	UNIT	AV	0	1
476	LOAD	Y	27	22	0.00	06	A.13	06	GLOR	UNIT	AV	0	1
477	LOAD	Y	27	22	A.13	11	A.13	11	GLOR	UNIT	AV	0	1
478	LOAD	Y	27	22	A.13	06	A.13	06	GLOR	UNIT	AV	0	1
479	LOAD	X	27	22	16.25	11	A.13	11	GLOR	UNIT	AV	0	1
480	LOAD	Y	27	22	16.25	06	A.13	06	GLOR	UNIT	AV	0	1
481	LOAD	X	23	25	0.00	06	A.13	06	GLOR	UNIT	AV	0	1
482	LOAD	Y	23	25	0.00	05	A.13	05	GLOR	UNIT	AV	0	1
483	LOAD	X	23	25	A.13	06	A.13	06	GLOR	UNIT	AV	0	1
484	LOAD	Y	23	25	A.13	05	A.13	05	GLOR	UNIT	AV	0	1
485	LOAD	X	23	25	16.25	09	A.13	09	GLOR	UNIT	AV	0	1
486	LOAD	Y	23	25	16.25	05	A.13	05	GLOR	UNIT	AV	0	1
487	LOAD	Y	25	27	0.00	20	A.13	20	GLOR	UNIT	AV	0	1
488	LOAD	Y	25	27	A.13	20	A.13	20	GLOR	UNIT	AV	0	1
489	LOAD	Y	27	23	16.25	20	A.13	20	GLOR	UNIT	AV	0	1
490	LOAD	Y	27	23	0.00	09	A.13	09	GLOR	UNIT	AV	0	1
491	LOAD	Y	27	23	0.00	05	A.13	05	GLOR	UNIT	AV	0	1
492	LOAD	X	27	23	A.13	09	A.13	09	GLOR	UNIT	AV	0	1
493	LOAD	Y	27	23	A.13	05	A.13	05	GLOR	UNIT	AV	0	1
494	LOAD	X	27	23	16.25	06	A.13	06	GLOR	UNIT	AV	0	1
495	LOAD	Y	27	23	16.25	05	A.13	05	GLOR	UNIT	AV	0	1
496	LOAD	Y	34	35	0.00	23	A.59	23	GLOR	UNIT	AV	0	1
497	LOAD	Y	34	35	6.59	23	A.59	23	GLOR	UNIT	AV	0	1
498	LOAD	Y	34	35	13.14	23	A.59	23	GLOR	UNIT	AV	0	1
499	LOAD	Y	35	36	0.00	23	6.59	23	GLOR	UNIT	AV	0	1
500	LOAD	Y	35	36	6.59	23	A.59	23	GLOR	UNIT	AV	0	1
501	LOAD	Y	35	37	13.18	23	6.59	23	GLOR	UNIT	AV	0	1
502	LOAD	X	36	37	0.00	10	6.59	10	GLOR	UNIT	AV	0	1
503	LOAD	Y	36	37	0.00	06	A.59	06	GLOR	UNIT	AV	0	1
504	LOAD	X	36	37	6.59	10	A.59	10	GLOR	UNIT	AV	0	1
505	LOAD	Y	36	37	6.59	06	A.59	06	GLOR	UNIT	AV	0	1
506	LOAD	X	36	37	13.18	10	A.59	10	GLOR	UNIT	AV	0	1
507	LOAD	Y	36	37	13.18	06	A.59	06	GLOR	UNIT	AV	0	1
508	LOAD	X	37	38	0.00	07	10.07	07	GLOR	UNIT	AV	0	1
509	LOAD	Y	37	38	0.00	03	10.07	03	GLOR	UNIT	AV	0	1
510	LOAD	X	37	38	10.07	07	10.07	07	GLOR	UNIT	AV	0	1
511	LOAD	Y	37	38	10.07	03	10.07	03	GLOR	UNIT	AV	0	1
512	LOAD	X	37	38	20.15	07	10.07	07	GLOR	UNIT	AV	0	1
513	LOAD	Y	37	38	20.15	03	10.07	03	GLOR	UNIT	AV	0	1
514	LOAD	X	38	39	0.00	07	10.07	07	GLOR	UNIT	AV	0	1
515	LOAD	Y	38	39	0.00	02	10.07	02	GLOR	UNIT	AV	0	1
516	LOAD	X	38	39	10.07	07	10.07	07	GLOR	UNIT	AV	0	1
517	LOAD	Y	38	39	10.07	03	10.07	03	GLOR	UNIT	AV	0	1
518	LOAD	X	38	39	20.15	07	10.07	07	GLOR	UNIT	AV	0	1
519	LOAD	Y	38	39	20.15	03	10.07	03	GLOR	UNIT	AV	0	1
520	LOAD	X	39	34	0.00	10	A.59	10	GLOR	UNIT	AV	0	1
521	LOAD	Y	39	34	0.00	06	A.59	06	GLOR	UNIT	AV	0	1
522	LOAD	X	39	34	6.59	10	A.59	10	GLOR	UNIT	AV	0	1
523	LOAD	Y	39	34	6.59	06	A.59	06	GLOR	UNIT	AV	0	1
524	LOAD	X	39	34	13.14	10	A.59	10	GLOR	UNIT	AV	0	1
525	LOAD	Y	39	34	13.14	06	A.59	06	GLOR	UNIT	AV	0	1
526	LOAD	X	35	37	0.00	10	A.59	10	GLOR	UNIT	AV	0	1
527	LOAD	Y	35	37	0.00	06	A.59	06	GLOR	UNIT	AV	0	1
528	LOAD	X	35	37	6.59	10	A.59	10	GLOR	UNIT	AV	0	1
529	LOAD	Y	35	37	6.59	06	A.59	06	GLOR	UNIT	AV	0	1



530	LOAD	X	35	37	13.1A	10	6.59	10	GLOR	UNIT	AV	0	1
531	LOAD	Y	35	37	13.1A	06	6.59	06	GLOR	UNIT	AV	0	1
532	LOAD	Y	37	39	0.00	24	6.59	24	GLOR	UNIT	AV	0	1
533	LOAD	Y	37	39	6.59	24	6.59	24	GLOR	UNIT	AV	0	1
534	LOAD	Y	37	39	13.17	24	6.59	24	GLOR	UNIT	AV	0	1
535	LOAD	X	39	35	6.00	10	6.59	10	GLOR	UNIT	AV	0	1
536	LOAD	Y	39	35	0.00	06	6.59	06	GLOR	UNIT	AV	0	1
537	LOAD	X	39	35	6.59	10	6.59	10	GLOR	UNIT	AV	0	1
538	LOAD	Y	39	35	6.59	06	6.59	06	GLOR	UNIT	AV	0	1
539	LOAD	X	39	35	13.18	10	6.59	10	GLOR	UNIT	AV	0	1
540	LOAD	Y	39	35	13.1A	06	6.59	06	GLOR	UNIT	AV	0	1
541	LOAD	Y	49	50	0.00	46	5.05	46	GLOR	UNIT	AV	0	1
542	LOAD	Y	49	50	5.05	46	5.05	46	GLOR	UNIT	AV	0	1
543	LOAD	Y	49	50	10.10	46	5.05	46	GLOR	UNIT	AV	0	1
544	LOAD	Y	50	51	0.00	46	5.05	46	GLOR	UNIT	AV	0	1
545	LOAD	Y	50	51	5.05	46	5.05	46	GLOR	UNIT	AV	0	1
546	LOAD	Y	50	51	10.10	46	5.05	46	GLOR	UNIT	AV	0	1
547	LOAD	X	51	52	0.00	20	5.05	20	GLOR	UNIT	AV	0	1
548	LOAD	Y	51	52	0.00	12	5.05	12	GLOR	UNIT	AV	0	1
549	LOAD	X	51	52	5.05	20	5.05	21	GLOR	UNIT	AV	0	1
550	LOAD	Y	51	52	5.05	12	5.05	12	GLOR	UNIT	AV	0	1
551	LOAD	X	51	52	10.10	21	5.05	21	GLOR	UNIT	AV	0	1
552	LOAD	Y	51	52	10.10	12	5.05	12	GLOR	UNIT	AV	0	1
553	LOAD	Y	52	53	0.00	21	5.05	21	GLOR	UNIT	AV	0	1
554	LOAD	Y	52	53	0.00	12	5.05	12	GLOR	UNIT	AV	0	1
555	LOAD	X	52	53	5.05	21	5.05	21	GLOR	UNIT	AV	0	1
556	LOAD	Y	52	53	5.05	12	5.05	12	GLOR	UNIT	AV	0	1
557	LOAD	Y	52	53	10.10	21	5.05	21	GLOR	UNIT	AV	0	1
558	LOAD	Y	52	53	10.10	12	5.05	12	GLOR	UNIT	AV	0	1
559	LOAD	X	53	54	0.00	21	5.05	21	GLOR	UNIT	AV	0	1
560	LOAD	Y	53	54	0.00	12	5.05	12	GLOR	UNIT	AV	0	1
561	LOAD	Y	53	54	5.05	21	5.05	21	GLOR	UNIT	AV	0	1
562	LOAD	Y	53	54	5.05	12	5.05	12	GLOR	UNIT	AV	0	1
563	LOAD	X	53	54	10.10	21	5.05	21	GLOR	UNIT	AV	0	1
564	LOAD	Y	53	54	10.10	12	5.05	12	GLOR	UNIT	AV	0	1
565	LOAD	X	54	49	0.00	21	5.05	21	GLOR	UNIT	AV	0	1
566	LOAD	Y	54	49	0.00	12	5.05	12	GLOR	UNIT	AV	0	1
567	LOAD	X	54	49	5.05	21	5.05	20	GLOR	UNIT	AV	0	1
568	LOAD	Y	54	49	5.05	12	5.05	12	GLOR	UNIT	AV	0	1
569	LOAD	X	54	49	10.10	20	5.05	20	GLOR	UNIT	AV	0	1
570	LOAD	Y	54	49	10.10	12	5.05	12	GLOR	UNIT	AV	0	1
571	LOAD	X	54	52	0.00	16	5.05	16	GLOR	UNIT	AV	0	1
572	LOAD	Y	54	52	0.00	09	5.05	09	GLOR	UNIT	AV	0	1
573	LOAD	X	54	52	5.05	16	5.05	17	GLOR	UNIT	AV	0	1
574	LOAD	Y	54	52	5.05	09	5.05	10	GLOR	UNIT	AV	0	1
575	LOAD	X	54	52	10.10	17	5.05	17	GLOR	UNIT	AV	0	1
576	LOAD	Y	54	52	10.10	10	5.05	10	GLOR	UNIT	AV	0	1
577	LOAD	Y	52	54	0.00	39	5.05	39	GLOR	UNIT	AV	0	1
578	LOAD	Y	52	54	5.05	39	5.05	39	GLOR	UNIT	AV	0	1
579	LOAD	Y	52	54	10.09	17	5.05	17	GLOR	UNIT	AV	0	1
580	LOAD	X	54	50	0.00	10	5.05	10	GLOR	UNIT	AV	0	1
581	LOAD	Y	54	50	0.00	17	5.05	17	GLOR	UNIT	AV	0	1
582	LOAD	X	54	50	5.05	10	5.05	09	GLOR	UNIT	AV	0	1
583	LOAD	Y	54	50	5.05	16	5.05	16	GLOR	UNIT	AV	0	1
584	LOAD	X	54	50	10.10	09	5.05	09	GLOR	UNIT	AV	0	1
585	LOAD	Y	54	50	10.10	09	5.05	09	GLOR	UNIT	AV	0	1



586	LOAD	X	11	22	0.00-	1	13.44-	1	GLOR UNIT	AV	0	1
587	LOAD	Y	11	22	0.00-	19	13.44-	19	GLOR UNIT	AV	0	1
588	LOAD	Z	11	22	0.00-	1	13.44-	1	GLOR UNIT	AV	0	1
589	LOAD	X	11	22	13.44-	1	13.44-	1	GLOR UNIT	AV	0	1
590	LOAD	Y	11	22	13.44-	19	13.44-	20	GLOR UNIT	AV	0	1
591	LOAD	Z	11	22	13.44-	1	13.44-	1	GLOR UNIT	AV	0	1
592	LOAD	X	11	22	26.88-	1	13.44-	1	GLOR UNIT	AV	0	1
593	LOAD	Y	11	22	26.88-	20	13.44-	21	GLOR UNIT	AV	0	1
594	LOAD	Z	11	22	26.88-	1	13.44-	1	GLOR UNIT	AV	0	1
595	LOAD	X	11	24	0.00-	1	13.44-	1	GLOR UNIT	AV	0	1
596	LOAD	Y	11	24	0.00-	19	13.44-	19	GLOR UNIT	AV	0	1
597	LOAD	Z	11	24	0.00-	1	13.44-	1	GLOR UNIT	AV	0	1
598	LOAD	X	11	24	13.44	1	13.44	1	GLOR UNIT	AV	0	1
599	LOAD	Y	11	24	13.44	19	13.44	20	GLOR UNIT	AV	0	1
600	LOAD	Z	11	24	13.44-	1	13.44-	1	GLOR UNIT	AV	0	1
601	LOAD	X	11	24	26.88-	1	13.44-	1	GLOR UNIT	AV	0	1
602	LOAD	Y	11	24	26.88-	20	13.44	21	GLOR UNIT	AV	0	1
603	LOAD	Z	11	24	26.88-	1	13.44-	1	GLOR UNIT	AV	0	1
604	LOAD	X	13	24	0.00-	03	13.44-	03	GLOR UNIT	AV	0	1
605	LOAD	Y	13	24	0.00-	14	13.44	14	GLOR UNIT	AV	0	1
606	LOAD	Z	13	24	0.00	09	13.44	09	GLOR UNIT	AV	0	1
607	LOAD	X	13	24	13.44-	03	13.44-	03	GLOR UNIT	AV	0	1
608	LOAD	Y	13	24	13.44	14	13.44	14	GLOR UNIT	AV	0	1
609	LOAD	Z	13	24	13.44	09	13.44	09	GLOR UNIT	AV	0	1
610	LOAD	X	13	24	26.88-	03	13.44-	03	GLOR UNIT	AV	0	1
611	LOAD	Y	13	24	26.88	10	13.44	15	GLOR UNIT	AV	0	1
612	LOAD	Z	13	24	26.88	09	13.44	09	GLOR UNIT	AV	0	1
613	LOAD	X	13	26	0.00-	04	13.44-	04	GLOR UNIT	AV	0	1
614	LOAD	Y	13	26	0.00	16	13.44	16	GLOR UNIT	AV	0	1
615	LOAD	Z	13	26	0.00-	08	13.44-	08	GLOR UNIT	AV	0	1
616	LOAD	X	13	26	13.44-	04	13.44-	04	GLOR UNIT	AV	0	1
617	LOAD	Y	13	26	13.44	16	13.44	17	GLOR UNIT	AV	0	1
618	LOAD	Z	13	26	13.44-	08	13.44-	08	GLOR UNIT	AV	0	1
619	LOAD	X	13	26	26.88-	04	13.44-	04	GLOR UNIT	AV	0	1
620	LOAD	Y	13	26	26.88	17	13.44	17	GLOR UNIT	AV	0	1
621	LOAD	Z	13	26	26.88-	04	13.44-	04	GLOR UNIT	AV	0	1
622	LOAD	X	15	26	0.00	04	13.44	04	GLOR UNIT	AV	0	1
623	LOAD	Y	15	26	0.00	16	13.44	16	GLOR UNIT	AV	0	1
624	LOAD	Z	15	26	0.00-	08	13.44-	08	GLOR UNIT	AV	0	1
625	LOAD	X	15	26	13.44	04	13.44	04	GLOR UNIT	AV	0	1
626	LOAD	Y	15	26	13.44	16	13.44	17	GLOR UNIT	AV	0	1
627	LOAD	Z	15	26	13.44-	08	13.44-	08	GLOR UNIT	AV	0	1
628	LOAD	X	15	26	26.88	04	13.44	04	GLOR UNIT	AV	0	1
629	LOAD	Y	15	26	26.88	17	13.44	17	GLOR UNIT	AV	0	1
630	LOAD	Z	15	26	26.88-	08	13.44-	08	GLOR UNIT	AV	0	1
631	LOAD	X	15	22	0.00	03	13.44	03	GLOR UNIT	AV	0	1
632	LOAD	Y	15	22	0.00	14	13.44	14	GLOR UNIT	AV	0	1
633	LOAD	Z	15	22	0.00	09	13.44	09	GLOR UNIT	AV	0	1
634	LOAD	X	15	22	13.44	03	13.44	03	GLOR UNIT	AV	0	1
635	LOAD	Y	15	22	13.44	14	13.44	14	GLOR UNIT	AV	0	1
636	LOAD	Z	15	22	13.44	09	13.44	09	GLOR UNIT	AV	0	1
637	LOAD	X	15	22	26.88	03	13.44	03	GLOR UNIT	AV	0	1
638	LOAD	Y	15	22	26.88	14	13.44	14	GLOR UNIT	AV	0	1
639	LOAD	Z	15	22	26.88	09	13.44	09	GLOR UNIT	AV	0	1
640	LOAD	X	22	36	0.00	1	18.20	1	GLOR UNIT	AV	0	1
641	LOAD	Y	22	36	0.00	27	18.20	20	GLOR UNIT	AV	0	1



642	LOAD	Z	22	36	0.00=	1	1A.20=	1	GLOR	UNIF	WV	0	1
643	LOAD	X	22	36	1A.20	1	1A.20	1	GLOR	UNIF	WV	0	1
644	LOAD	Y	22	36	1A.20	29	1A.20	32	GLOR	UNIF	WV	0	1
645	LOAD	Z	22	36	1A.20=	1	1A.20=	1	GLOR	UNIF	WV	0	1
646	LOAD	X	22	36	1A.20	1	1A.20	1	GLOR	UNIF	WV	0	1
647	LOAD	Y	22	36	1A.20	32	1A.20	34	GLOR	UNIF	WV	0	1
648	LOAD	Z	22	36	1A.20=	1	1A.20=	1	GLOR	UNIF	WV	0	1
649	LOAD	X	24	34	0.00=	0A	20.9A=	09	GLOR	UNIF	WV	0	1
650	LOAD	Y	24	34	0.00	11	20.9A	13	GLOR	UNIF	WV	0	1
651	LOAD	Z	24	34	0.00=	10	20.9A=	12	GLOR	UNIF	WV	0	1
652	LOAD	X	24	34	20.9A=	09	20.9A=	17	GLOR	UNIF	WV	0	1
653	LOAD	Y	24	34	20.9A	13	20.9A	14	GLOR	UNIF	WV	0	1
654	LOAD	Z	24	34	20.9A=	12	20.9A=	13	GLOR	UNIF	WV	0	1
655	LOAD	X	24	34	41.93=	10	20.9A=	13	GLOR	UNIF	WV	0	1
656	LOAD	Y	24	34	41.93=	14	20.9A	15	GLOR	UNIF	WV	0	1
657	LOAD	Z	24	34	41.93=	15	20.9A=	14	GLOR	UNIF	WV	0	1
658	LOAD	X	26	34	1.00	0A	1A.20	0A	GLOR	UNIF	WV	0	1
659	LOAD	Y	26	34	0.00	14	1A.20	15	GLOR	UNIF	WV	0	1
660	LOAD	Z	26	34	0.00	12	1A.20	13	GLOR	UNIF	WV	0	1
661	LOAD	X	26	34	1A.20	0A	1A.20	09	GLOR	UNIF	WV	0	1
662	LOAD	Y	26	34	1A.20	15	1A.20	1A	GLOR	UNIF	WV	0	1
663	LOAD	Z	26	34	1A.20	15	1A.20	14	GLOR	UNIF	WV	0	1
664	LOAD	X	26	34	1A.20	09	1A.20	09	GLOR	UNIF	WV	0	1
665	LOAD	Y	26	34	1A.20	16	1A.20	17	GLOR	UNIF	WV	0	1
666	LOAD	Z	26	34	1A.20	14	1A.20	15	GLOR	UNIF	WV	0	1
667	LOAD	X	36	49	0.00=	1	11.8A=	02	GLOR	UNIF	WV	0	1
668	LOAD	Y	36	49	0.00	3A	11.8A	40	GLOR	UNIF	WV	0	1
669	LOAD	Z	36	49	0.00=	1	11.8A=	1	GLOR	UNIF	WV	0	1
670	LOAD	X	36	49	11.8A=	02	11.8A=	02	GLOR	UNIF	WV	0	1
671	LOAD	Y	36	49	11.8A	40	11.8A	40	GLOR	UNIF	WV	0	1
672	LOAD	Z	36	49	11.8A=	1	11.8A=	02	GLOR	UNIF	WV	0	1
673	LOAD	X	36	49	23.72=	02	11.8A=	02	GLOR	UNIF	WV	0	1
674	LOAD	Y	36	49	23.72	44	11.8A	50	GLOR	UNIF	WV	0	1
675	LOAD	Z	36	49	23.72=	02	11.8A=	02	GLOR	UNIF	WV	0	1
676	LOAD	X	36	49	35.5A=	02	11.8A=	02	GLOR	UNIF	WV	0	1
677	LOAD	Y	36	49	35.5A	50	11.8A	5A	GLOR	UNIF	WV	0	1
678	LOAD	Z	36	49	35.5A=	02	11.8A=	02	GLOR	UNIF	WV	0	1
679	LOAD	X	38	51	0.00=	0A	13.93=	09	GLOR	UNIF	WV	0	1
680	LOAD	Y	38	51	0.00	15	13.93	17	GLOR	UNIF	WV	0	1
681	LOAD	Z	38	51	0.00	1A	13.93	1A	GLOR	UNIF	WV	0	1
682	LOAD	X	38	51	13.93=	09	13.93=	10	GLOR	UNIF	WV	0	1
683	LOAD	Y	38	51	13.93	17	13.93	19	GLOR	UNIF	WV	0	1
684	LOAD	Z	38	51	13.93	1A	13.93	21	GLOR	UNIF	WV	0	1
685	LOAD	X	38	51	27.4A=	10	13.93=	11	GLOR	UNIF	WV	0	1
686	LOAD	Y	38	51	27.4A	19	13.93	23	GLOR	UNIF	WV	0	1
687	LOAD	Z	38	51	27.4A	21	13.93	25	GLOR	UNIF	WV	0	1
688	LOAD	X	38	51	41.7A=	11	13.93=	12	GLOR	UNIF	WV	0	1
689	LOAD	Y	38	51	41.7A	21	13.93	23	GLOR	UNIF	WV	0	1
690	LOAD	Z	38	51	41.7A	23	13.93	2A	GLOR	UNIF	WV	0	1
691	LOAD	X	34	53	0.00	09	9.49	10	GLOR	UNIF	WV	0	1
692	LOAD	Y	34	53	0.00	23	9.49	25	GLOR	UNIF	WV	0	1
693	LOAD	Z	34	53	0.00=	15	9.49=	16	GLOR	UNIF	WV	0	1
694	LOAD	X	34	53	9.49	10	9.49	11	GLOR	UNIF	WV	0	1
695	LOAD	Y	34	53	9.49	25	9.49	2A	GLOR	UNIF	WV	0	1
696	LOAD	Z	34	53	9.49=	16	9.49=	1A	GLOR	UNIF	WV	0	1
697	LOAD	X	34	53	16.97	11	9.49	13	GLOR	UNIF	WV	0	1



698	LOAD	Y	34	53	18.97	28	9.49	31	GLOR	UNIF	WV	0	1
699	LOAD	Z	34	53	18.97	18	9.49	20	GLOR	UNIF	WV	0	1
700	LOAD	X	34	53	28.46	13	9.49	14	GLOR	UNIF	WV	0	1
701	LOAD	Y	34	53	28.46	31	9.49	34	GLOR	UNIF	WV	0	1
702	LOAD	Z	34	53	28.46	20	9.49	22	GLOR	UNIF	WV	0	1
703	LOAD	X	34	53	37.95	14	9.49	15	GLOR	UNIF	WV	0	1
704	LOAD	Y	34	53	37.95	34	9.49	34	GLOR	UNIF	WV	0	1
705	LOAD	Z	34	53	37.95	22	9.49	25	GLOR	UNIF	WV	0	1
706	LOAD	Y	55	58	6.00	113	5.70	126	GLOR	UNIF	WV	0	1
707	LOAD	Z	55	58	6.00	126	5.70	141	GLOR	UNIF	WV	0	1
708	LOAD	Y	55	58	11.40	141	5.70	156	GLOR	UNIF	WV	0	1
709	LOAD	Z	55	58	17.10	156	5.70	178	GLOR	UNIF	WV	0	1
710	LOAD	Y	55	58	22.80	178	5.70	202	GLOR	UNIF	WV	0	1
711	LOAD	Z	58	61	0.00	202	4.19	221	GLOR	UNIF	WV	0	1
712	LOAD	Y	58	61	4.19	221	4.19	244	GLOR	UNIF	WV	0	1
713	LOAD	Z	58	61	8.39	244	4.19	270	GLOR	UNIF	WV	0	1
714	LOAD	Y	58	61	0.00	113	5.70	126	GLOR	UNIF	WV	0	1
715	LOAD	Z	58	61	5.70	126	5.70	141	GLOR	UNIF	WV	0	1
716	LOAD	Y	58	61	11.40	141	5.70	156	GLOR	UNIF	WV	0	1
717	LOAD	Z	58	61	17.10	156	5.70	178	GLOR	UNIF	WV	0	1
718	LOAD	Y	58	61	22.80	178	5.70	202	GLOR	UNIF	WV	0	1
719	LOAD	Z	59	64	0.00	202	4.19	221	GLOR	UNIF	WV	0	1
720	LOAD	Y	59	64	4.19	221	4.19	244	GLOR	UNIF	WV	0	1
721	LOAD	Z	59	64	8.39	244	4.19	270	GLOR	UNIF	WV	0	1
722	LOAD	Y	57	60	0.00	116	5.70	129	GLOR	UNIF	WV	0	1
723	LOAD	Z	57	60	5.70	129	5.70	143	GLOR	UNIF	WV	0	1
724	LOAD	Y	57	60	11.40	143	5.70	160	GLOR	UNIF	WV	0	1
725	LOAD	Z	57	60	17.10	160	5.70	180	GLOR	UNIF	WV	0	1
726	LOAD	Y	57	60	22.80	180	5.70	201	GLOR	UNIF	WV	0	1
727	LOAD	Z	60	70	0.00	201	2.00	210	GLOR	UNIF	WV	0	1
728	LOAD	Y	60	70	2.00	210	2.00	220	GLOR	UNIF	WV	0	1
729	LOAD	Z	60	70	4.00	220	2.00	231	GLOR	UNIF	WV	0	1
730	LOAD	Y	70	67	0.00	231	.22	232	GLOR	UNIF	WV	0	1
731	LOAD	Z	70	67	.22	232	.22	233	GLOR	UNIF	WV	0	1
732	LOAD	Y	70	67	.44	233	.22	234	GLOR	UNIF	WV	0	1
733	LOAD	Z	70	67	.67	234	.22	235	GLOR	UNIF	WV	0	1
734	LOAD	Y	70	67	.89	235	.22	237	GLOR	UNIF	WV	0	1
735	LOAD	Z	70	67	1.11	237	.22	238	GLOR	UNIF	WV	0	1
736	LOAD	Y	70	67	1.33	238	.22	239	GLOR	UNIF	WV	0	1
737	LOAD	Z	70	67	1.56	239	.22	241	GLOR	UNIF	WV	0	1
738	LOAD	Y	70	67	1.78	241	.22		GLOR	UNIF	WV	0	1
739	LOAD	Z	58	59	0.00	71	9.67	71	GLOR	UNIF	WV	0	1
740	LOAD	Y	58	59	9.67	71	9.67	71	GLOR	UNIF	WV	0	1
741	LOAD	Z	58	59	19.33	71	9.67	71	GLOR	UNIF	WV	0	1
742	LOAD	Y	59	60	0.00	31	9.67	52	GLOR	UNIF	WV	0	1
743	LOAD	Z	59	60	0.00	14	9.67	18	GLOR	UNIF	WV	0	1
744	LOAD	Y	59	60	9.67	32	9.67	32	GLOR	UNIF	WV	0	1
745	LOAD	Z	59	60	9.67	14	9.67	14	GLOR	UNIF	WV	0	1
746	LOAD	Y	59	60	19.33	32	9.67	31	GLOR	UNIF	WV	0	1
747	LOAD	Z	59	60	19.33	14	9.67	14	GLOR	UNIF	WV	0	1
748	LOAD	Y	60	58	0.00	31	9.67	32	GLOR	UNIF	WV	0	1
749	LOAD	Z	60	58	0.00	14	9.67	14	GLOR	UNIF	WV	0	1
750	LOAD	Y	60	58	9.67	52	9.67	32	GLOR	UNIF	WV	0	1
751	LOAD	Z	60	58	9.67	14	9.67	14	GLOR	UNIF	WV	0	1
752	LOAD	Y	60	58	19.33	32	9.67	31	GLOR	UNIF	WV	0	1
753	LOAD	Z	60	58	19.33	14	9.67	14	GLOR	UNIF	WV	0	1



750	LOAD	Y	59	61	0.00	71	9.13	74	GLOR	UNIF	MV	0	1
755	LOAD	Y	59	61	9.13	74	9.13	86	GLOR	UNIF	MV	0	1
760	LOAD	Y	59	61	10.25	86	9.13	95	GLOR	UNIF	MV	0	1
765	LOAD	X	60	64	0.00	24	8.41	27	GLOR	UNIF	MV	0	1
768	LOAD	Y	60	64	0.00	24	8.41	33	GLOR	UNIF	MV	0	1
769	LOAD	Z	60	64	0.00	25	8.41	28	GLOR	UNIF	MV	0	1
770	LOAD	X	60	64	8.41	27	8.41	30	GLOR	UNIF	MV	0	1
771	LOAD	Y	60	64	8.41	33	8.41	36	GLOR	UNIF	MV	0	1
772	LOAD	Z	60	64	8.41	24	8.41	31	GLOR	UNIF	MV	0	1
773	LOAD	X	60	64	10.41	30	8.41	33	GLOR	UNIF	MV	0	1
774	LOAD	Y	60	64	10.41	36	8.41	39	GLOR	UNIF	MV	0	1
775	LOAD	Z	60	64	10.41	31	8.41	34	GLOR	UNIF	MV	0	1
776	LOAD	X	58	67	0.00	24	7.07	27	GLOR	UNIF	MV	0	1
777	LOAD	Y	58	67	0.00	29	7.07	32	GLOR	UNIF	MV	0	1
778	LOAD	Z	58	67	0.00	25	7.07	28	GLOR	UNIF	MV	0	1
779	LOAD	X	58	67	7.07	27	7.07	29	GLOR	UNIF	MV	0	1
780	LOAD	Y	58	67	7.07	32	7.07	35	GLOR	UNIF	MV	0	1
781	LOAD	Z	58	67	7.07	24	7.07	30	GLOR	UNIF	MV	0	1
782	LOAD	X	58	67	14.10	29	7.07	31	GLOR	UNIF	MV	0	1
783	LOAD	Y	58	67	14.10	35	7.07	37	GLOR	UNIF	MV	0	1
784	LOAD	Z	58	67	14.10	30	7.07	32	GLOR	UNIF	MV	0	1
785	LOAD	X	70	66	0.00	42	.53	43	GLOR	UNIF	MV	0	1
786	LOAD	Y	70	66	.53	43	.53	43	GLOR	UNIF	MV	0	1
787	LOAD	Z	70	66	.53	43	.53	43	GLOR	UNIF	MV	0	1
788	LOAD	X	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
789	LOAD	Y	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
790	LOAD	Z	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
791	LOAD	X	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
792	LOAD	Y	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
793	LOAD	Z	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
794	LOAD	X	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
795	LOAD	Y	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
796	LOAD	Z	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
797	LOAD	X	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
798	LOAD	Y	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
799	LOAD	Z	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
800	LOAD	X	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
801	LOAD	Y	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
802	LOAD	Z	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
803	LOAD	X	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
804	LOAD	Y	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
805	LOAD	Z	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
806	LOAD	X	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
807	LOAD	Y	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
808	LOAD	Z	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1
809	LOAD	X	70	66	1.00	43	.53	43	GLOR	UNIF	MV	0	1

4.08 244106
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A10	LOAD	Y	10	22	10.81-	52	10.81-	54	GL04	UNIF	AV	0	2
A11	LOAD	Z	10	22	10.81	04	10.81	04	GL04	UNIF	AV	0	2
A12	LOAD	Y	10	22	21.63-	1	10.81-	1	GL04	UNIF	AV	0	2
A13	LOAD	Y	10	22	21.63-	54	10.81-	57	GL04	UNIF	AV	0	2
A14	LOAD	Y	10	22	21.63	04	10.81	05	GL04	UNIF	AV	0	2
A15	LOAD	Y	22	34	0.00-	1	10.81-	1	GL04	UNIF	AV	0	2
A16	LOAD	Y	22	34	0.00-	57	10.81-	62	GL04	UNIF	AV	0	2
A17	LOAD	Z	22	34	0.00	05	10.81	05	GL04	UNIF	AV	0	2
A18	LOAD	X	22	34	10.81-	1	10.81-	1	GL06	UNIF	AV	0	2
A19	LOAD	X	22	34	10.81-	62	10.81-	64	GL04	UNIF	AV	0	2
A20	LOAD	Z	22	34	10.81	05	10.81	05	GL04	UNIF	AV	0	2
A21	LOAD	X	22	34	21.63-	1	10.81-	1	GL04	UNIF	AV	0	2
A22	LOAD	X	22	34	21.63-	64	10.81-	74	GL04	UNIF	AV	0	2
A23	LOAD	Z	22	34	21.63	05	10.81	06	GL04	UNIF	AV	0	2
B24	LOAD	X	34	40	0.00-	1	4.73-	1	GL04	UNIF	AV	0	2
A25	LOAD	Y	34	40	0.00-	74	4.73-	82	GL04	UNIF	AV	0	2
A26	LOAD	Z	34	40	0.00	05	4.73	06	GL04	UNIF	AV	0	2
A27	LOAD	X	34	40	4.73-	1	4.73-	1	GL04	UNIF	AV	0	2
B28	LOAD	Y	34	40	4.73-	82	4.73-	87	GL04	UNIF	AV	0	2
A29	LOAD	Z	34	40	4.73	06	4.73	06	GL04	UNIF	AV	0	2
A30	LOAD	X	34	40	4.45-	1	4.73-	1	GL04	UNIF	AV	0	2
A31	LOAD	Y	34	40	4.45-	87	4.73-	93	GL04	UNIF	AV	0	2
A32	LOAD	Z	34	40	0.45	06	4.73	06	GL04	UNIF	AV	0	2
A33	LOAD	X	40	49	0.00-	1	6.09-	1	GL04	UNIF	AV	0	2
A34	LOAD	Y	40	49	0.00-	92	6.09-	101	GL04	UNIF	AV	0	2
A35	LOAD	Z	40	49	0.00	08	6.09	09	GL04	UNIF	AV	0	2
A36	LOAD	X	40	49	6.09-	1	6.09-	1	GL04	UNIF	AV	0	2
A37	LOAD	Y	40	49	6.09	101	6.09	111	GL04	UNIF	AV	0	2
A38	LOAD	Z	40	49	6.09	09	6.09	10	GL04	UNIF	AV	0	2
A39	LOAD	X	40	49	12.17-	1	6.09-	02	GL04	UNIF	AV	0	2
A40	LOAD	Y	40	49	12.17-	111	6.09-	123	GL04	UNIF	AV	0	2
A41	LOAD	Z	40	49	12.17	10	6.09	11	GL04	UNIF	AV	0	2
A42	LOAD	X	49	55	0.00-	1	1.52-	1	GL04	UNIF	AV	0	2
A43	LOAD	Y	49	55	0.00-	123	1.52-	124	GL04	UNIF	AV	0	2
A44	LOAD	Z	49	55	0.00	10	1.52	10	GL04	UNIF	AV	0	2
A45	LOAD	X	49	55	1.52-	1	1.52-	1	GL04	UNIF	AV	0	2
A46	LOAD	Y	49	55	1.52-	126	1.52-	129	GL04	UNIF	AV	0	2
A47	LOAD	Z	49	55	1.52	10	1.52	11	GL04	UNIF	AV	0	2
A48	LOAD	X	49	55	3.04-	1	1.52-	02	GL04	UNIF	AV	0	2
A49	LOAD	Y	49	55	3.04-	129	1.52-	133	GL04	UNIF	AV	0	2
A50	LOAD	Z	49	55	3.04	11	1.52	11	GL04	UNIF	AV	0	2
A51	LOAD	X	12	24	0.00	1	10.81	1	GL04	UNIF	AV	0	2
A52	LOAD	Y	12	24	0.00-	51	10.81-	52	GL04	UNIF	AV	0	2
A53	LOAD	Z	12	24	0.00	04	10.81	04	GL04	UNIF	AV	0	2
A54	LOAD	X	12	24	10.81	1	10.81	1	GL04	UNIF	AV	0	2
A55	LOAD	Y	12	24	10.81-	52	10.81-	50	GL04	UNIF	AV	0	2
A56	LOAD	Z	12	24	10.81	04	10.81	04	GL04	UNIF	AV	0	2
A57	LOAD	X	12	24	21.63	1	10.81	1	GL04	UNIF	AV	0	2
A58	LOAD	Y	12	24	21.63-	54	10.81-	57	GL04	UNIF	AV	0	2
A59	LOAD	Z	12	24	21.63	04	10.81	05	GL04	UNIF	AV	0	2
A60	LOAD	X	24	36	0.00	1	10.81	1	GL04	UNIF	AV	0	2
A61	LOAD	Y	24	36	0.00-	57	10.81-	62	GL04	UNIF	AV	0	2
A62	LOAD	Z	24	36	0.00	05	10.81	05	GL04	UNIF	AV	0	2
A63	LOAD	X	24	36	10.81	1	10.81	1	GL04	UNIF	AV	0	2
A64	LOAD	Y	24	36	10.81-	62	10.81-	64	GL04	UNIF	AV	0	2
A65	LOAD	Z	24	36	10.81	05	10.81	05	GL04	UNIF	AV	0	2



A66	LOAD	X	24	36	21.63	1	10.81	1	GLOR	UNIF	MV	0	2
A67	LOAD	Y	24	36	21.63	68	10.81	76	GLOR	UNIF	MV	0	2
A68	LOAD	Z	24	36	21.63	05	10.81	06	GLOR	UNIF	MV	0	2
A69	LOAD	X	36	41	0.00	1	4.73	1	GLOR	UNIF	MV	0	2
A70	LOAD	Y	36	41	0.00	74	4.73	82	GLOR	UNIF	MV	0	2
A71	LOAD	Z	36	41	0.00	05	4.73	06	GLOR	UNIF	MV	0	2
A72	LOAD	X	36	41	4.73	1	4.73	1	GLOR	UNIF	MV	0	2
A73	LOAD	Y	36	41	4.73	82	4.73	87	GLOR	UNIF	MV	0	2
A74	LOAD	Z	36	41	4.73	06	4.73	06	GLOR	UNIF	MV	0	2
A75	LOAD	X	36	41	9.45	1	4.73	1	GLOR	UNIF	MV	0	2
A76	LOAD	Y	36	41	9.45	87	4.73	93	GLOR	UNIF	MV	0	2
A77	LOAD	Z	36	41	9.45	06	4.73	06	GLOR	UNIF	MV	0	2
A78	LOAD	X	41	51	0.00	1	6.09	1	GLOR	UNIF	MV	0	2
A79	LOAD	Y	41	51	0.00	92	6.09	101	GLOR	UNIF	MV	0	2
A80	LOAD	Z	41	51	0.00	08	6.09	09	GLOR	UNIF	MV	0	2
A81	LOAD	X	41	51	6.09	1	6.09	1	GLOR	UNIF	MV	0	2
A82	LOAD	Y	41	51	6.09	101	6.09	111	GLOR	UNIF	MV	0	2
A83	LOAD	Z	41	51	6.09	09	6.09	10	GLOR	UNIF	MV	0	2
A84	LOAD	X	41	51	12.17	1	6.09	02	GLOR	UNIF	MV	0	2
A85	LOAD	Y	41	51	12.17	111	6.09	123	GLOR	UNIF	MV	0	2
A86	LOAD	Z	41	51	12.17	10	6.09	11	GLOR	UNIF	MV	0	2
A87	LOAD	X	51	56	0.00	1	1.52	1	GLOR	UNIF	MV	0	2
A88	LOAD	Y	51	56	0.00	123	1.52	126	GLOR	UNIF	MV	0	2
A89	LOAD	Z	51	56	0.00	10	1.52	10	GLOR	UNIF	MV	0	2
A90	LOAD	X	51	56	1.52	1	1.52	1	GLOR	UNIF	MV	0	2
A91	LOAD	Y	51	56	1.52	126	1.52	129	GLOR	UNIF	MV	0	2
A92	LOAD	Z	51	56	1.52	10	1.52	11	GLOR	UNIF	MV	0	2
A93	LOAD	X	51	56	3.04	1	1.52	02	GLOR	UNIF	MV	0	2
A94	LOAD	Y	51	56	3.04	129	1.52	133	GLOR	UNIF	MV	0	2
A95	LOAD	Z	51	56	3.04	11	1.52	11	GLOR	UNIF	MV	0	2
A96	LOAD	X	14	26	0.00	39	10.81	41	GLOR	UNIF	MV	0	2
A97	LOAD	Y	14	26	0.00	07	10.81	07	GLOR	UNIF	MV	0	2
A98	LOAD	Z	14	26	10.81	41	10.81	42	GLOR	UNIF	MV	0	2
A99	LOAD	X	14	26	10.81	07	10.81	07	GLOR	UNIF	MV	0	2
900	LOAD	Y	14	26	21.63	42	10.81	06	GLOR	UNIF	MV	0	2
901	LOAD	Z	14	26	21.63	07	10.81	06	GLOR	UNIF	MV	0	2
902	LOAD	X	26	38	0.00	43	10.81	47	GLOR	UNIF	MV	0	2
903	LOAD	Y	26	38	0.00	09	10.81	09	GLOR	UNIF	MV	0	2
904	LOAD	Z	26	38	10.81	47	10.81	51	GLOR	UNIF	MV	0	2
905	LOAD	X	26	38	10.81	09	10.81	10	GLOR	UNIF	MV	0	2
906	LOAD	Y	26	38	21.72	51	10.81	55	GLOR	UNIF	MV	0	2
907	LOAD	Z	26	38	21.72	10	10.81	10	GLOR	UNIF	MV	0	2
908	LOAD	X	38	42	0.00	51	5.01	55	GLOR	UNIF	MV	0	2
909	LOAD	Y	38	42	0.00	20	5.01	21	GLOR	UNIF	MV	0	2
910	LOAD	Z	38	42	5.01	55	5.01	59	GLOR	UNIF	MV	0	2
911	LOAD	X	38	42	5.01	21	5.01	23	GLOR	UNIF	MV	0	2
912	LOAD	Y	38	42	10.02	59	5.01	64	GLOR	UNIF	MV	0	2
913	LOAD	Z	38	42	10.02	23	5.01	25	GLOR	UNIF	MV	0	2
914	LOAD	X	42	53	0.00	53	5.31	58	GLOR	UNIF	MV	0	2
915	LOAD	Y	42	53	0.00	33	5.31	36	GLOR	UNIF	MV	0	2
916	LOAD	Z	42	53	5.31	58	5.31	61	GLOR	UNIF	MV	0	2
917	LOAD	X	42	53	5.31	36	5.31	41	GLOR	UNIF	MV	0	2
918	LOAD	Y	42	53	10.63	64	5.31	70	GLOR	UNIF	MV	0	2
919	LOAD	Z	42	53	10.63	40	5.31	44	GLOR	UNIF	MV	0	2
920	LOAD	X	42	53	15.94	70	5.31	78	GLOR	UNIF	MV	0	2
921	LOAD	Y	42	53	15.94	44	5.31	49	GLOR	UNIF	MV	0	2



922	LOAD	Y	53	57	0.00=	106	1.52=	109	GL04	UNIF	WV	0	2
923	LOAD	Z	53	57	0.00=	18	1.52=	18	GL06	UNIF	WV	0	2
924	LOAD	Y	53	57	1.52=	109	1.52=	113	GL04	UNIF	WV	0	2
925	LOAD	Z	53	57	1.52=	18	1.52=	19	GL04	UNIF	WV	0	2
926	LOAD	Y	53	57	5.00=	113	1.52=	116	GL04	UNIF	WV	0	2
927	LOAD	Z	53	57	5.00=	19	1.52=	19	GL04	UNIF	WV	0	2
928	LOAD	Y	10	11	0.00=	23	9.67=	23	GL04	UNIF	WV	0	2
929	LOAD	Y	10	11	9.67=	23	9.67=	23	GL04	UNIF	WV	0	2
930	LOAD	Y	10	11	19.33=	23	9.67=	23	GL04	UNIF	WV	0	2
931	LOAD	Y	11	12	0.00=	23	9.67=	23	GL04	UNIF	WV	0	2
932	LOAD	Y	11	12	9.67=	23	9.67=	23	GL04	UNIF	WV	0	2
933	LOAD	Y	11	12	19.33=	23	9.67=	23	GL04	UNIF	WV	0	2
934	LOAD	X	12	13	0.00=	10	9.67	10	GL04	UNIF	WV	0	2
935	LOAD	Y	12	13	0.00=	06	9.67=	06	GL04	UNIF	WV	0	2
936	LOAD	X	12	13	9.67	10	9.67	10	GL03	UNIF	WV	0	2
937	LOAD	Y	12	13	9.67=	06	9.67=	06	GL04	UNIF	WV	0	2
938	LOAD	X	12	13	19.33	19	9.67	00	GL04	UNIF	WV	0	2
939	LOAD	Y	12	13	19.33=	06	9.67=	05	GL04	UNIF	WV	0	2
940	LOAD	X	13	14	0.00	09	9.67	09	GL04	UNIF	WV	0	2
941	LOAD	Y	13	14	0.00=	05	9.67=	05	GL04	UNIF	WV	0	2
942	LOAD	X	13	14	9.67	09	9.67	08	GL09	UNIF	WV	0	2
943	LOAD	Y	13	14	9.67=	05	9.67=	05	GL04	UNIF	WV	0	2
944	LOAD	X	13	14	19.34	08	9.67	08	GL04	UNIF	WV	0	2
945	LOAD	Y	13	14	19.34=	05	9.67=	05	GL04	UNIF	WV	0	2
946	LOAD	X	14	15	0.00=	08	9.67=	08	GL04	UNIF	WV	0	2
947	LOAD	Y	14	15	9.67=	05	9.67=	05	GL04	UNIF	WV	0	2
948	LOAD	X	14	15	9.67=	05	9.67=	05	GL04	UNIF	WV	0	2
949	LOAD	Y	14	15	19.34=	09	9.67=	09	GL04	UNIF	WV	0	2
950	LOAD	X	14	15	19.34=	05	9.67=	05	GL04	UNIF	WV	0	2
951	LOAD	Y	14	15	19.34=	05	9.67=	05	GL04	UNIF	WV	0	2
952	LOAD	X	15	16	0.00=	09	9.67=	10	GL04	UNIF	WV	0	2
953	LOAD	Y	15	16	0.00=	05	9.67=	06	GL04	UNIF	WV	0	2
954	LOAD	X	15	16	9.67=	10	9.67=	10	GL04	UNIF	WV	0	2
955	LOAD	Y	15	16	9.67=	06	9.67=	06	GL04	UNIF	WV	0	2
956	LOAD	X	15	16	19.33=	10	9.67=	10	GL04	UNIF	WV	0	2
957	LOAD	Y	15	16	19.33=	06	9.67=	06	GL04	UNIF	WV	0	2
958	LOAD	X	15	16	0.00=	08	9.67=	08	GL04	UNIF	WV	0	2
959	LOAD	Y	15	16	0.00=	04	9.67=	04	GL04	UNIF	WV	0	2
960	LOAD	X	15	16	9.67=	08	9.67=	07	GL04	UNIF	WV	0	2
961	LOAD	Y	15	16	9.67=	04	9.67=	04	GL04	UNIF	WV	0	2
962	LOAD	X	15	16	19.33=	07	9.67=	07	GL04	UNIF	WV	0	2
963	LOAD	Y	15	16	19.33=	04	9.67=	04	GL04	UNIF	WV	0	2
964	LOAD	X	15	16	0.00=	17	9.67=	17	GL04	UNIF	WV	0	2
965	LOAD	Y	15	16	9.67=	17	9.67=	17	GL04	UNIF	WV	0	2
966	LOAD	X	15	16	19.33=	17	9.67=	17	GL04	UNIF	WV	0	2
967	LOAD	Y	15	16	0.00=	07	9.67=	07	GL04	UNIF	WV	0	2
968	LOAD	X	15	16	0.00=	04	9.67=	04	GL04	UNIF	WV	0	2
969	LOAD	Y	15	16	9.67=	07	9.67=	07	GL04	UNIF	WV	0	2
970	LOAD	X	15	16	9.67=	04	9.67=	04	GL04	UNIF	WV	0	2
971	LOAD	Y	15	16	19.33	08	9.67	08	GL04	UNIF	WV	0	2
972	LOAD	X	15	16	19.33=	04	9.67=	04	GL04	UNIF	WV	0	2
973	LOAD	Y	22	23	0.00=	26	9.13=	26	GL04	UNIF	WV	0	2
974	LOAD	X	22	23	0.00=	26	9.13=	26	GL04	UNIF	WV	0	2
975	LOAD	Y	22	23	19.25=	26	9.13=	26	GL04	UNIF	WV	0	2
976	LOAD	X	22	23	0.00=	26	9.13=	26	GL04	UNIF	WV	0	2
977	LOAD	Y	23	24	9.13=	26	9.13=	26	GL04	UNIF	WV	0	2



978	LOAD	Y	23	24	16.25-	26	A.13-	26	GL04	UNIT	AV	0	2
979	LOAD	X	24	25	A.00-	11	A.13	11	GL04	UNIT	AV	0	2
980	LOAD	Y	24	25	0.00-	06	A.13-	06	GL04	UNIT	AV	0	2
981	LOAD	X	24	25	A.13	11	A.13	11	GL04	UNIT	AV	0	2
982	LOAD	Y	24	25	A.13-	06	A.13-	06	GL04	UNIT	AV	0	2
983	LOAD	X	24	25	16.25	11	A.13	11	GL04	UNIT	AV	0	2
984	LOAD	Y	24	25	16.25-	06	A.13-	06	GL04	UNIT	AV	0	2
985	LOAD	X	25	26	A.00	11	A.13	10	GL04	UNIT	AV	0	2
986	LOAD	Y	25	26	0.00-	06	A.13-	06	GL04	UNIT	AV	0	2
987	LOAD	X	25	26	A.13	10	A.13	10	GL04	UNIT	AV	0	2
988	LOAD	Y	25	26	A.13-	06	A.13-	06	GL04	UNIT	AV	0	2
989	LOAD	X	25	26	16.25	10	A.13	09	GL04	UNIT	AV	0	2
990	LOAD	Y	25	26	16.25-	06	A.13-	05	GL04	UNIT	AV	0	2
991	LOAD	X	26	27	0.00-	09	A.13-	10	GL04	UNIT	AV	0	2
992	LOAD	Y	26	27	A.00-	05	A.13-	06	GL04	UNIT	AV	0	2
993	LOAD	X	26	27	A.13-	10	A.13-	10	GL04	UNIT	AV	0	2
994	LOAD	Y	26	27	A.13-	06	A.13-	06	GL04	UNIT	AV	0	2
995	LOAD	X	26	27	16.25-	10	A.13-	11	GL04	UNIT	AV	0	2
996	LOAD	Y	26	27	16.25	06	A.13-	06	GL04	UNIT	AV	0	2
997	LOAD	X	27	28	0.00-	11	A.13-	11	GL04	UNIT	AV	0	2
998	LOAD	Y	27	28	A.13-	06	A.13-	06	GL04	UNIT	AV	0	2
999	LOAD	X	27	28	8.13-	11	A.13-	11	GL04	UNIT	AV	0	2
1000	LOAD	Y	27	28	A.13-	06	A.13-	06	GL04	UNIT	AV	0	2
1001	LOAD	X	27	28	16.25-	11	A.13-	11	GL04	UNIT	AV	0	2
1002	LOAD	Y	27	28	16.25	06	A.13-	06	GL04	UNIT	AV	0	2
1003	LOAD	X	28	29	0.00-	09	A.13-	09	GL04	UNIT	AV	0	2
1004	LOAD	Y	28	29	0.00-	05	A.13-	05	GL04	UNIT	AV	0	2
1005	LOAD	X	28	29	A.13-	09	A.13-	09	GL04	UNIT	AV	0	2
1006	LOAD	Y	28	29	A.13-	05	A.13-	05	GL04	UNIT	AV	0	2
1007	LOAD	X	28	29	16.25-	04	A.13-	08	GL04	UNIT	AV	0	2
1008	LOAD	Y	28	29	16.25-	05	A.13-	05	GL04	UNIT	AV	0	2
1009	LOAD	X	29	30	0.00-	19	A.13-	19	GL04	UNIT	AV	0	2
1010	LOAD	Y	29	30	A.13-	19	A.13-	19	GL04	UNIT	AV	0	2
1011	LOAD	X	29	30	16.25-	19	A.13-	19	GL04	UNIT	AV	0	2
1012	LOAD	Y	29	30	0.00	19	A.13	19	GL04	UNIT	AV	0	2
1013	LOAD	X	29	30	0.00-	05	A.13-	05	GL04	UNIT	AV	0	2
1014	LOAD	Y	29	30	A.13	09	A.13	09	GL04	UNIT	AV	0	2
1015	LOAD	X	29	30	8.13-	05	A.13-	05	GL04	UNIT	AV	0	2
1016	LOAD	Y	29	30	16.25	09	A.13	09	GL04	UNIT	AV	0	2
1017	LOAD	X	29	30	16.25-	05	A.13-	05	GL04	UNIT	AV	0	2
1018	LOAD	Y	30	31	0.00-	24	A.59-	24	GL04	UNIT	AV	0	2
1019	LOAD	X	30	31	0.00-	24	A.59-	24	GL04	UNIT	AV	0	2
1020	LOAD	Y	30	31	13.14-	24	A.59-	24	GL04	UNIT	AV	0	2
1021	LOAD	X	30	31	0.00-	24	A.59-	24	GL04	UNIT	AV	0	2
1022	LOAD	Y	30	31	6.59-	24	A.59-	24	GL04	UNIT	AV	0	2
1023	LOAD	X	30	31	13.14-	24	A.59-	24	GL04	UNIT	AV	0	2
1024	LOAD	Y	30	31	0.00	10	A.59	10	GL04	UNIT	AV	0	2
1025	LOAD	X	30	31	0.00-	06	A.59-	06	GL04	UNIT	AV	0	2
1026	LOAD	Y	30	31	6.59	10	A.59	10	GL04	UNIT	AV	0	2
1027	LOAD	X	30	31	6.59-	06	A.59-	06	GL04	UNIT	AV	0	2
1028	LOAD	Y	30	31	13.14	10	A.59	10	GL04	UNIT	AV	0	2
1029	LOAD	X	30	31	13.14-	09	A.59-	09	GL04	UNIT	AV	0	2
1030	LOAD	Y	30	31	0.00	07	10.07	07	GL04	UNIT	AV	0	2
1031	LOAD	X	30	31	0.00-	02	10.07-	02	GL04	UNIT	AV	0	2
1032	LOAD	Y	30	31	10.07	07	10.07	07	GL04	UNIT	AV	0	2
1033	LOAD	X	30	31	10.07-	02	10.07-	02	GL04	UNIT	AV	0	2

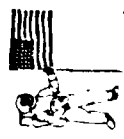


1030	LOAD	X	37	38	20.15	06	10.07	06	GLOR	UNIT	AV	0	2
1031	LOAD	X	37	38	20.15	02	10.07	02	GLOR	UNIT	AV	0	2
1032	LOAD	X	38	39	0.00	06	10.07	06	GLOR	UNIT	AV	0	2
1033	LOAD	X	38	39	0.00	02	10.07	02	GLOR	UNIT	AV	0	2
1034	LOAD	X	38	39	10.07	06	10.07	06	GLOR	UNIT	AV	0	2
1035	LOAD	X	38	39	10.07	02	10.07	02	GLOR	UNIT	AV	0	2
1036	LOAD	X	38	39	20.15	07	10.07	07	GLOR	UNIT	AV	0	2
1037	LOAD	X	38	39	20.15	02	10.07	02	GLOR	UNIT	AV	0	2
1038	LOAD	X	39	34	0.00	10	6.59	10	GLOR	UNIT	AV	0	2
1039	LOAD	X	39	34	0.00	06	6.59	06	GLOR	UNIT	AV	0	2
1040	LOAD	X	39	34	6.59	10	6.59	10	GLOR	UNIT	AV	0	2
1041	LOAD	X	39	34	6.59	06	6.59	06	GLOR	UNIT	AV	0	2
1042	LOAD	X	39	34	13.18	10	6.59	10	GLOR	UNIT	AV	0	2
1043	LOAD	X	39	34	13.18	06	6.59	06	GLOR	UNIT	AV	0	2
1044	LOAD	X	39	34	0.00	10	6.59	10	GLOR	UNIT	AV	0	2
1045	LOAD	X	39	34	0.00	06	6.59	06	GLOR	UNIT	AV	0	2
1046	LOAD	X	39	34	6.59	10	6.59	10	GLOR	UNIT	AV	0	2
1047	LOAD	X	39	34	6.59	06	6.59	06	GLOR	UNIT	AV	0	2
1048	LOAD	X	39	34	13.18	10	6.59	10	GLOR	UNIT	AV	0	2
1049	LOAD	X	39	34	13.18	06	6.59	06	GLOR	UNIT	AV	0	2
1050	LOAD	X	39	34	0.00	10	6.59	10	GLOR	UNIT	AV	0	2
1051	LOAD	X	39	34	0.00	06	6.59	06	GLOR	UNIT	AV	0	2
1052	LOAD	X	39	34	6.59	10	6.59	10	GLOR	UNIT	AV	0	2
1053	LOAD	X	39	34	6.59	06	6.59	06	GLOR	UNIT	AV	0	2
1054	LOAD	X	39	34	13.18	10	6.59	10	GLOR	UNIT	AV	0	2
1055	LOAD	X	39	34	13.18	06	6.59	06	GLOR	UNIT	AV	0	2
1056	LOAD	X	39	34	0.00	10	6.59	10	GLOR	UNIT	AV	0	2
1057	LOAD	X	39	34	0.00	06	6.59	06	GLOR	UNIT	AV	0	2
1058	LOAD	X	39	34	6.59	10	6.59	10	GLOR	UNIT	AV	0	2
1059	LOAD	X	39	34	6.59	06	6.59	06	GLOR	UNIT	AV	0	2
1060	LOAD	X	39	34	13.18	10	6.59	10	GLOR	UNIT	AV	0	2
1061	LOAD	X	39	34	13.18	06	6.59	06	GLOR	UNIT	AV	0	2
1062	LOAD	X	39	34	0.00	10	6.59	10	GLOR	UNIT	AV	0	2
1063	LOAD	X	39	34	0.00	06	6.59	06	GLOR	UNIT	AV	0	2
1064	LOAD	X	49	50	5.05	06	5.05	06	GLOR	UNIT	AV	0	2
1065	LOAD	X	49	50	5.05	10	5.05	10	GLOR	UNIT	AV	0	2
1066	LOAD	X	49	50	10.10	06	5.05	06	GLOR	UNIT	AV	0	2
1067	LOAD	X	49	50	10.10	10	5.05	10	GLOR	UNIT	AV	0	2
1068	LOAD	X	50	51	0.00	06	5.05	06	GLOR	UNIT	AV	0	2
1069	LOAD	X	50	51	0.00	10	5.05	10	GLOR	UNIT	AV	0	2
1070	LOAD	X	51	52	0.00	06	5.05	06	GLOR	UNIT	AV	0	2
1071	LOAD	X	51	52	5.05	10	5.05	10	GLOR	UNIT	AV	0	2
1072	LOAD	X	51	52	5.05	06	5.05	06	GLOR	UNIT	AV	0	2
1073	LOAD	X	51	52	10.10	10	5.05	10	GLOR	UNIT	AV	0	2
1074	LOAD	X	51	52	10.10	06	5.05	06	GLOR	UNIT	AV	0	2
1075	LOAD	X	52	53	0.00	10	5.05	10	GLOR	UNIT	AV	0	2
1076	LOAD	X	52	53	0.00	06	5.05	06	GLOR	UNIT	AV	0	2
1077	LOAD	X	52	53	5.05	10	5.05	10	GLOR	UNIT	AV	0	2
1078	LOAD	X	52	53	5.05	06	5.05	06	GLOR	UNIT	AV	0	2
1079	LOAD	X	52	53	10.10	10	5.05	10	GLOR	UNIT	AV	0	2
1080	LOAD	X	52	53	10.10	06	5.05	06	GLOR	UNIT	AV	0	2
1081	LOAD	X	53	54	0.00	10	5.05	10	GLOR	UNIT	AV	0	2
1082	LOAD	X	53	54	0.00	06	5.05	06	GLOR	UNIT	AV	0	2
1083	LOAD	X	53	54	5.05	10	5.05	10	GLOR	UNIT	AV	0	2
1084	LOAD	X	53	54	5.05	06	5.05	06	GLOR	UNIT	AV	0	2
1085	LOAD	X	53	54	10.10	10	5.05	10	GLOR	UNIT	AV	0	2
1086	LOAD	X	53	54	10.10	06	5.05	06	GLOR	UNIT	AV	0	2
1087	LOAD	X	54	49	0.00	10	5.05	10	GLOR	UNIT	AV	0	2
1088	LOAD	X	54	49	0.00	06	5.05	06	GLOR	UNIT	AV	0	2
1089	LOAD	X	54	49	5.05	10	5.05	10	GLOR	UNIT	AV	0	2

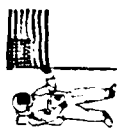




1090	LOAD	Y	54	49	5.05-	12	5.05-	12	GLOR	UNIF	WV	0	2
1091	LOAD	X	54	49	10.10-	21	5.05-	21	GLOR	UNIF	WV	0	2
1092	LOAD	Y	54	49	10.10-	12	5.05-	12	GLOR	UNIF	WV	0	2
1093	LOAD	X	50	52	0.00-	17	5.05-	16	GLOR	UNIF	WV	0	2
1094	LOAD	Y	50	52	0.00-	10	5.05-	09	GLOR	UNIF	WV	0	2
1095	LOAD	X	50	52	5.05-	16	5.05-	16	GLOR	UNIF	WV	0	2
1096	LOAD	Y	50	52	5.05-	09	5.05-	09	GLOR	UNIF	WV	0	2
1097	LOAD	X	50	52	10.10-	16	5.05-	16	GLOR	UNIF	WV	0	2
1098	LOAD	Y	50	52	10.10-	09	5.05-	09	GLOR	UNIF	WV	0	2
1099	LOAD	X	52	54	0.00-	37	5.05-	37	GLOR	UNIF	WV	0	2
1100	LOAD	Y	52	54	5.05-	37	5.05-	37	GLOR	UNIF	WV	0	2
1101	LOAD	X	52	54	10.00-	37	5.05-	37	GLOR	UNIF	WV	0	2
1102	LOAD	Y	54	50	0.00-	16	5.05-	16	GLOR	UNIF	WV	0	2
1103	LOAD	X	54	50	0.00-	09	5.05-	09	GLOR	UNIF	WV	0	2
1104	LOAD	Y	54	50	5.05-	16	5.05-	16	GLOR	UNIF	WV	0	2
1105	LOAD	X	54	50	5.05-	09	5.05-	09	GLOR	UNIF	WV	0	2
1106	LOAD	Y	54	50	10.10-	16	5.05-	17	GLOR	UNIF	WV	0	2
1107	LOAD	X	54	50	10.10-	09	5.05-	16	GLOR	UNIF	WV	0	2
1108	LOAD	Y	11	22	0.00-	1	13.44	1	GLOR	UNIF	WV	0	2
1109	LOAD	X	11	22	0.00-	21	13.44	21	GLOR	UNIF	WV	0	2
1110	LOAD	Z	11	22	0.00	1	13.44	1	GLOR	UNIF	WV	0	2
1111	LOAD	X	11	22	13.44	1	13.44	1	GLOR	UNIF	WV	0	2
1112	LOAD	Y	11	22	13.44-	21	13.44-	22	GLOR	UNIF	WV	0	2
1113	LOAD	Z	11	22	13.44	1	13.44	1	GLOR	UNIF	WV	0	2
1114	LOAD	X	11	22	26.88	1	13.44	1	GLOR	UNIF	WV	0	2
1115	LOAD	Y	11	22	26.88-	22	13.44-	23	GLOR	UNIF	WV	0	2
1116	LOAD	Z	11	22	26.88	1	13.44	1	GLOR	UNIF	WV	0	2
1117	LOAD	X	11	24	0.00-	1	13.44-	1	GLOR	UNIF	WV	0	2
1118	LOAD	Y	11	24	0.00-	21	13.44-	21	GLOR	UNIF	WV	0	2
1119	LOAD	Z	11	24	0.00	1	13.44	1	GLOR	UNIF	WV	0	2
1120	LOAD	X	11	24	15.44-	1	13.44-	1	GLOR	UNIF	WV	0	2
1121	LOAD	Y	11	24	15.44-	21	13.44-	22	GLOR	UNIF	WV	0	2
1122	LOAD	Z	11	24	13.44	1	13.44	1	GLOR	UNIF	WV	0	2
1123	LOAD	X	11	24	26.88-	1	13.44-	1	GLOR	UNIF	WV	0	2
1124	LOAD	Y	11	24	26.88-	22	15.44-	23	GLOR	UNIF	WV	0	2
1125	LOAD	Z	11	24	26.88	1	15.44	1	GLOR	UNIF	WV	0	2
1126	LOAD	X	13	24	0.00	03	13.44	03	GLOR	UNIF	WV	0	2
1127	LOAD	Y	13	24	0.00-	15	15.44-	14	GLOR	UNIF	WV	0	2
1128	LOAD	Z	13	24	0.00-	08	15.44-	09	GLOR	UNIF	WV	0	2
1129	LOAD	X	13	24	13.44	03	13.44	03	GLOR	UNIF	WV	0	2
1130	LOAD	Y	13	24	15.44-	14	13.44-	15	GLOR	UNIF	WV	0	2
1131	LOAD	Z	13	24	15.44-	09	13.44-	09	GLOR	UNIF	WV	0	2
1132	LOAD	X	13	24	26.88	03	15.44	03	GLOR	UNIF	WV	0	2
1133	LOAD	Y	13	24	26.88-	15	13.44-	16	GLOR	UNIF	WV	0	2
1134	LOAD	Z	13	24	26.88-	09	13.44-	10	GLOR	UNIF	WV	0	2
1135	LOAD	X	13	26	0.00	03	13.44	03	GLOR	UNIF	WV	0	2
1136	LOAD	Y	13	26	0.00-	15	13.44-	14	GLOR	UNIF	WV	0	2
1137	LOAD	Z	13	26	0.00	07	15.44	07	GLOR	UNIF	WV	0	2
1138	LOAD	X	13	26	15.44	03	15.44	03	GLOR	UNIF	WV	0	2
1139	LOAD	Y	13	26	13.44-	14	13.44-	14	GLOR	UNIF	WV	0	2
1140	LOAD	Z	13	26	13.44	07	13.44	07	GLOR	UNIF	WV	0	2
1141	LOAD	X	13	26	26.88	03	15.44	03	GLOR	UNIF	WV	0	2
1142	LOAD	Y	13	26	26.88-	14	13.44-	14	GLOR	UNIF	WV	0	2
1143	LOAD	Z	13	26	26.88	07	13.44	07	GLOR	UNIF	WV	0	2
1144	LOAD	X	15	26	0.00-	03	13.44-	03	GLOR	UNIF	WV	0	2
1145	LOAD	Y	15	26	0.00-	15	13.44-	14	GLOR	UNIF	WV	0	2



1146	LOAD	Z	15	24	0.00	07	13.44	07	07	GL04	UNIT	02
1147	LOAD	X	15	24	13.44	03	13.44	03	02	GL04	UNIT	02
1148	LOAD	Y	15	24	13.44	14	13.44	14	02	GL04	UNIT	02
1149	LOAD	Z	15	24	13.44	07	13.44	07	02	GL04	UNIT	02
1150	LOAD	X	15	24	26.88	03	13.44	03	02	GL04	UNIT	02
1151	LOAD	Y	15	24	26.88	14	13.44	14	02	GL04	UNIT	02
1152	LOAD	Z	15	24	26.88	07	13.44	07	02	GL04	UNIT	02
1153	LOAD	X	15	22	0.00	03	13.44	03	02	GL04	UNIT	02
1154	LOAD	Y	15	22	0.00	14	13.44	14	02	GL04	UNIT	02
1155	LOAD	Z	15	22	0.00	07	13.44	07	02	GL04	UNIT	02
1156	LOAD	X	15	22	13.44	03	13.44	03	02	GL04	UNIT	02
1157	LOAD	Y	15	22	13.44	14	13.44	14	02	GL04	UNIT	02
1158	LOAD	Z	15	22	13.44	09	13.44	09	02	GL04	UNIT	02
1159	LOAD	X	15	22	26.88	03	13.44	03	02	GL04	UNIT	02
1160	LOAD	Y	15	22	26.88	14	13.44	14	02	GL04	UNIT	02
1161	LOAD	Z	15	22	26.88	09	13.44	09	02	GL04	UNIT	02
1162	LOAD	X	22	36	0.00	1	18.20	1	02	GL04	UNIT	02
1163	LOAD	Y	22	36	0.00	29	18.20	29	02	GL04	UNIT	02
1164	LOAD	Z	22	36	0.00	1	18.20	1	02	GL04	UNIT	02
1165	LOAD	X	22	36	18.20	1	18.20	1	02	GL04	UNIT	02
1166	LOAD	Y	22	36	18.20	31	18.20	31	02	GL04	UNIT	02
1167	LOAD	Z	22	36	18.20	1	18.20	1	02	GL04	UNIT	02
1168	LOAD	X	22	36	36.39	1	18.20	1	02	GL04	UNIT	02
1169	LOAD	Y	22	36	36.39	34	18.20	34	02	GL04	UNIT	02
1170	LOAD	Z	22	36	36.39	1	18.20	1	02	GL04	UNIT	02
1171	LOAD	X	24	34	0.00	09	20.96	09	02	GL04	UNIT	02
1172	LOAD	Y	24	34	0.00	12	20.96	12	02	GL04	UNIT	02
1173	LOAD	Z	24	34	0.00	11	20.96	11	02	GL04	UNIT	02
1174	LOAD	X	24	34	20.96	09	20.96	09	02	GL04	UNIT	02
1175	LOAD	Y	24	34	20.96	12	20.96	12	02	GL04	UNIT	02
1176	LOAD	Z	24	34	20.96	12	20.96	12	02	GL04	UNIT	02
1177	LOAD	X	24	34	41.93	09	20.96	09	02	GL04	UNIT	02
1178	LOAD	Y	24	34	41.93	12	20.96	12	02	GL04	UNIT	02
1179	LOAD	Z	24	34	41.93	12	20.96	12	02	GL04	UNIT	02
1180	LOAD	X	26	34	0.00	05	13.65	05	02	GL04	UNIT	02
1181	LOAD	Y	26	34	0.00	11	13.65	11	02	GL04	UNIT	02
1182	LOAD	Z	26	34	0.00	10	13.65	10	02	GL04	UNIT	02
1183	LOAD	X	26	34	13.65	07	13.65	07	02	GL04	UNIT	02
1184	LOAD	Y	26	34	13.65	13	13.65	13	02	GL04	UNIT	02
1185	LOAD	Z	26	34	13.65	11	13.65	11	02	GL04	UNIT	02
1186	LOAD	X	26	34	27.29	04	13.65	04	02	GL04	UNIT	02
1187	LOAD	Y	26	34	27.29	14	13.65	14	02	GL04	UNIT	02
1188	LOAD	Z	26	34	27.29	13	13.65	13	02	GL04	UNIT	02
1189	LOAD	X	26	34	40.94	09	13.65	09	02	GL04	UNIT	02
1190	LOAD	Y	26	34	40.94	16	13.65	16	02	GL04	UNIT	02
1191	LOAD	Z	26	34	40.94	14	13.65	14	02	GL04	UNIT	02
1192	LOAD	X	36	49	0.00	02	11.86	02	02	GL04	UNIT	02
1193	LOAD	Y	36	49	0.00	38	11.86	38	02	GL04	UNIT	02
1194	LOAD	Z	36	49	0.00	1	11.86	1	02	GL04	UNIT	02
1195	LOAD	X	36	49	11.86	02	11.86	02	02	GL04	UNIT	02
1196	LOAD	Y	36	49	11.86	42	11.86	42	02	GL04	UNIT	02
1197	LOAD	Z	36	49	11.86	02	11.86	02	02	GL04	UNIT	02
1198	LOAD	X	36	49	23.72	02	11.86	02	02	GL04	UNIT	02
1199	LOAD	Y	36	49	23.72	44	11.86	44	02	GL04	UNIT	02
1200	LOAD	Z	36	49	23.72	02	11.86	02	02	GL04	UNIT	02
1201	LOAD	X	36	49	44.54	02	11.86	02	02	GL04	UNIT	02



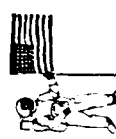
1202	LOAD	Y	36	49	35.58	53	11.84	60	GLOR	UNIF	MV	0	2
1203	LOAD	Z	34	49	35.58	02	11.84	02	GLOR	UNIF	MV	0	2
1204	LOAD	X	34	51	0.00	06	9.20	07	GLOR	UNIF	MV	0	2
1205	LOAD	X	34	51	0.00	11	9.20	13	GLOR	UNIF	MV	0	2
1206	LOAD	Z	34	51	0.00	13	9.20	15	GLOR	UNIF	MV	0	2
1207	LOAD	X	34	51	9.20	07	9.20	14	GLOR	UNIF	MV	0	2
1208	LOAD	Y	34	51	9.20	13	9.20	15	GLOR	UNIF	MV	0	2
1209	LOAD	Z	34	51	9.20	15	9.20	17	GLOR	UNIF	MV	0	2
1210	LOAD	X	34	51	18.57	08	9.20	00	GLOR	UNIF	MV	0	2
1211	LOAD	Y	34	51	18.57	15	9.20	17	GLOR	UNIF	MV	0	2
1212	LOAD	Z	34	51	18.57	17	9.20	10	GLOR	UNIF	MV	0	2
1213	LOAD	X	34	51	27.44	09	9.20	10	GLOR	UNIF	MV	0	2
1214	LOAD	Y	34	51	27.44	17	9.20	19	GLOR	UNIF	MV	0	2
1215	LOAD	Z	34	51	27.44	19	9.20	21	GLOR	UNIF	MV	0	2
1216	LOAD	X	34	51	37.14	10	9.20	11	GLOR	UNIF	MV	0	2
1217	LOAD	Y	34	51	37.14	19	9.20	22	GLOR	UNIF	MV	0	2
1218	LOAD	Z	34	51	37.14	21	9.20	24	GLOR	UNIF	MV	0	2
1219	LOAD	X	34	51	46.43	11	9.20	13	GLOR	UNIF	MV	0	2
1220	LOAD	Y	34	51	46.43	22	9.20	24	GLOR	UNIF	MV	0	2
1221	LOAD	Z	34	51	46.43	24	9.20	27	GLOR	UNIF	MV	0	2
1222	LOAD	X	34	53	0.00	10	15.81	11	GLOR	UNIF	MV	0	2
1223	LOAD	Y	34	53	0.00	24	15.81	27	GLOR	UNIF	MV	0	2
1224	LOAD	Z	34	53	0.00	16	15.81	17	GLOR	UNIF	MV	0	2
1225	LOAD	X	34	53	15.81	11	15.81	12	GLOR	UNIF	MV	0	2
1226	LOAD	Y	34	53	15.81	27	15.81	30	GLOR	UNIF	MV	0	2
1227	LOAD	Z	34	53	15.81	17	15.81	20	GLOR	UNIF	MV	0	2
1228	LOAD	X	34	53	31.62	12	15.81	13	GLOR	UNIF	MV	0	2
1229	LOAD	Y	34	53	31.62	30	15.81	33	GLOR	UNIF	MV	0	2
1230	LOAD	Z	34	53	31.62	20	15.81	22	GLOR	UNIF	MV	0	2
1231	LOAD	Y	55	58	5.70	117	5.70	130	GLOR	UNIF	MV	0	2
1232	LOAD	Z	55	58	5.70	130	5.70	146	GLOR	UNIF	MV	0	2
1233	LOAD	Y	55	58	11.00	146	5.70	163	GLOR	UNIF	MV	0	2
1234	LOAD	Z	55	58	17.10	163	5.70	185	GLOR	UNIF	MV	0	2
1235	LOAD	Y	55	58	22.80	185	5.70	210	GLOR	UNIF	MV	0	2
1236	LOAD	Z	55	61	0.00	210	3.97	220	GLOR	UNIF	MV	0	2
1237	LOAD	Y	58	61	3.97	229	3.97	248	GLOR	UNIF	MV	0	2
1238	LOAD	Z	58	61	7.95	248	3.97	275	GLOR	UNIF	MV	0	2
1239	LOAD	Y	56	59	0.00	117	5.70	130	GLOR	UNIF	MV	0	2
1240	LOAD	Z	56	59	5.70	130	5.70	146	GLOR	UNIF	MV	0	2
1241	LOAD	Y	56	59	11.40	146	5.70	163	GLOR	UNIF	MV	0	2
1242	LOAD	Z	56	59	17.10	163	5.70	185	GLOR	UNIF	MV	0	2
1243	LOAD	Y	56	59	22.80	185	5.70	210	GLOR	UNIF	MV	0	2
1244	LOAD	Z	59	64	0.00	210	3.97	229	GLOR	UNIF	MV	0	2
1245	LOAD	Y	59	64	3.97	229	3.97	248	GLOR	UNIF	MV	0	2
1246	LOAD	Z	59	64	7.95	248	3.97	275	GLOR	UNIF	MV	0	2
1247	LOAD	Y	57	60	0.00	104	5.70	114	GLOR	UNIF	MV	0	2
1248	LOAD	Z	57	60	5.70	114	5.70	129	GLOR	UNIF	MV	0	2
1249	LOAD	Y	57	60	11.40	129	5.70	146	GLOR	UNIF	MV	0	2
1250	LOAD	Z	57	60	17.10	144	5.70	163	GLOR	UNIF	MV	0	2
1251	LOAD	Y	57	60	22.80	163	5.70	185	GLOR	UNIF	MV	0	2
1252	LOAD	Z	60	70	0.00	183	2.00	192	GLOR	UNIF	MV	0	2
1253	LOAD	Y	60	70	2.00	192	2.00	201	GLOR	UNIF	MV	0	2
1254	LOAD	Z	60	70	4.00	201	2.00	206	GLOR	UNIF	MV	0	2
1255	LOAD	Y	70	67	0.00	209	1.35	215	GLOR	UNIF	MV	0	2
1256	LOAD	Z	70	67	1.35	215	1.35	223	GLOR	UNIF	MV	0	2
1257	LOAD	Y	70	67	2.71	223	1.35	231	GLOR	UNIF	MV	0	2



1258	LOAD	Y	58	59	0.00	74	9.67	74	GLOR	UNIT	AV	0	2
1259	LOAD	Y	58	59	9.67	74	9.67	74	GLOR	UNIT	AV	0	2
1260	LOAD	Y	58	59	19.33	74	9.67	74	GLOR	UNIT	AV	0	2
1261	LOAD	Y	59	60	0.00	32	9.67	31	GLOR	UNIT	AV	0	2
1262	LOAD	Y	59	60	0.00	32	9.67	31	GLOR	UNIT	AV	0	2
1263	LOAD	Y	59	60	9.67	31	9.67	30	GLOR	UNIT	AV	0	2
1264	LOAD	Y	59	60	9.67	18	9.67	17	GLOR	UNIT	AV	0	2
1265	LOAD	Y	59	60	19.33	30	9.67	28	GLOR	UNIT	AV	0	2
1266	LOAD	Y	59	60	19.33	17	9.67	16	GLOR	UNIT	AV	0	2
1267	LOAD	Y	60	58	0.00	28	9.67	30	GLOR	UNIT	AV	0	2
1268	LOAD	Y	60	58	0.00	18	9.67	17	GLOR	UNIT	AV	0	2
1269	LOAD	Y	60	58	9.67	30	9.67	31	GLOR	UNIT	AV	0	2
1270	LOAD	Y	60	58	9.67	17	9.67	18	GLOR	UNIT	AV	0	2
1271	LOAD	Y	60	58	19.33	31	9.67	32	GLOR	UNIT	AV	0	2
1272	LOAD	Y	60	58	19.33	18	9.67	19	GLOR	UNIT	AV	0	2
1273	LOAD	Y	59	61	0.00	74	8.65	81	GLOR	UNIT	AV	0	2
1274	LOAD	Y	59	61	8.65	81	8.65	84	GLOR	UNIT	AV	0	2
1275	LOAD	Y	59	61	17.29	88	8.65	97	GLOR	UNIT	AV	0	2
1276	LOAD	Y	60	64	0.00	22	6.25	25	GLOR	UNIT	AV	0	2
1277	LOAD	Y	60	64	0.00	26	6.25	29	GLOR	UNIT	AV	0	2
1278	LOAD	Y	60	64	0.00	23	6.25	25	GLOR	UNIT	AV	0	2
1279	LOAD	Y	60	64	6.25	25	6.25	27	GLOR	UNIT	AV	0	2
1280	LOAD	Y	60	64	6.25	29	6.25	32	GLOR	UNIT	AV	0	2
1281	LOAD	Y	60	64	6.25	25	6.25	28	GLOR	UNIT	AV	0	2
1282	LOAD	Y	60	64	12.49	27	6.25	30	GLOR	UNIT	AV	0	2
1283	LOAD	Y	60	64	12.49	32	6.25	36	GLOR	UNIT	AV	0	2
1284	LOAD	Y	60	64	12.49	28	6.25	31	GLOR	UNIT	AV	0	2
1285	LOAD	Y	60	64	18.74	30	6.25	33	GLOR	UNIT	AV	0	2
1286	LOAD	Y	60	64	18.74	36	6.25	39	GLOR	UNIT	AV	0	2
1287	LOAD	Y	60	64	18.74	31	6.25	34	GLOR	UNIT	AV	0	2
1288	LOAD	Y	58	67	0.00	25	7.69	27	GLOR	UNIT	AV	0	2
1289	LOAD	Y	58	67	0.00	31	7.69	32	GLOR	UNIT	AV	0	2
1290	LOAD	Y	58	67	0.00	26	7.69	28	GLOR	UNIT	AV	0	2
1291	LOAD	Y	58	67	7.69	27	7.69	28	GLOR	UNIT	AV	0	2
1292	LOAD	Y	58	67	7.69	32	7.69	34	GLOR	UNIT	AV	0	2
1293	LOAD	Y	58	67	7.69	24	7.69	29	GLOR	UNIT	AV	0	2
1294	LOAD	Y	58	67	15.38	28	7.69	30	GLOR	UNIT	AV	0	2
1295	LOAD	Y	58	67	15.38	34	7.69	36	GLOR	UNIT	AV	0	2
1296	LOAD	Y	58	67	15.38	29	7.69	31	GLOR	UNIT	AV	0	2
1297	LOAD	Y	70	66	0.00	38	2.02	40	GLOR	UNIT	AV	0	2
1298	LOAD	Y	70	66	2.02	40	2.02	41	GLOR	UNIT	AV	0	2
1299	LOAD	Y	70	66	4.04	41	2.02	43	GLOR	UNIT	AV	0	2
1300	LOAD	Y	70	68	0.00	38	2.02	40	GLOR	UNIT	AV	0	2
1301	LOAD	Y	70	68	2.02	40	2.02	41	GLOR	UNIT	AV	0	2
1302	LOAD	Y	70	68	4.04	41	2.02	43	GLOR	UNIT	AV	0	2
1303	LOAD	Y	3										
1304	LOAD	Y	1	4	0.00	-557	6.06	-557	GLOR	UNIT	OL	0	3
1305	LOAD	Y	4	16	0.00	-557	32.44	-557	GLOR	UNIT	OL	0	3
1306	LOAD	Y	16	28	0.00	-403	32.44	-403	GLOR	UNIT	OL	0	3
1307	LOAD	Y	28	43	0.00	-403	32.44	-403	GLOR	UNIT	OL	0	3
1308	LOAD	Y	43	55	0.00	-403	4.59	-403	GLOR	UNIT	OL	0	3
1309	LOAD	Y	2	5	0.00	-557	6.06	-557	GLOR	UNIT	OL	0	3
1310	LOAD	Y	5	17	0.00	-557	32.44	-557	GLOR	UNIT	OL	0	3
1311	LOAD	Y	17	29	0.00	-403	32.44	-403	GLOR	UNIT	OL	0	3
1312	LOAD	Y	29	44	0.00	-403	32.44	-403	GLOR	UNIT	OL	0	3
1313	LOAD	Y	44	56	0.00	-403	4.59	-403	GLOR	UNIT	OL	0	3



1314	LOAD	Z	3	6	0.00	-557	6.07	-557	GLOR	UNIT	DL	0	3
1315	LOAD	Z	4	18	0.00	-557	32.44	-557	GLOR	UNIT	DL	0	3
1316	LOAD	Z	18	30	0.00	-403	32.58	-403	GLOR	UNIT	DL	0	3
1317	LOAD	Z	30	45	0.00	-403	36.13	-403	GLOR	UNIT	DL	0	3
1318	LOAD	Z	45	57	0.00	-403	4.58	-403	GLOR	UNIT	DL	0	3
1319	LOAD	Z	10	22	0.00	-183	32.44	-183	GLOR	UNIT	DL	0	3
1320	LOAD	Z	22	34	0.00	-183	32.44	-183	GLOR	UNIT	DL	0	3
1321	LOAD	Z	34	40	0.00	-371	11.18	-371	GLOR	UNIT	DL	0	3
1322	LOAD	Z	40	49	0.00	-371	14.26	-371	GLOR	UNIT	DL	0	3
1323	LOAD	Z	49	55	0.00	-371	4.58	-371	GLOR	UNIT	DL	0	3
1324	LOAD	Z	12	24	0.00	-183	32.44	-183	GLOR	UNIT	DL	0	3
1325	LOAD	Z	24	36	0.00	-183	32.44	-183	GLOR	UNIT	DL	0	3
1326	LOAD	Z	36	41	0.00	-371	14.26	-371	GLOR	UNIT	DL	0	3
1327	LOAD	Z	41	51	0.00	-371	14.26	-371	GLOR	UNIT	DL	0	3
1328	LOAD	Z	51	56	0.00	-371	4.58	-371	GLOR	UNIT	DL	0	3
1329	LOAD	Z	14	26	0.00	-183	32.44	-183	GLOR	UNIT	DL	0	3
1330	LOAD	Z	26	38	0.00	-183	32.58	-183	GLOR	UNIT	DL	0	3
1331	LOAD	Z	38	42	0.00	-371	15.13	-371	GLOR	UNIT	DL	0	3
1332	LOAD	Z	42	53	0.00	-371	21.26	-371	GLOR	UNIT	DL	0	3
1333	LOAD	Z	53	57	0.00	-371	4.58	-371	GLOR	UNIT	DL	0	3
1334	LOAD	Z	11	11	1.71	-081	25.58	-081	GLOR	UNIT	DL	0	3
1335	LOAD	Z	11	12	1.71	-081	25.58	-081	GLOR	UNIT	DL	0	3
1336	LOAD	Z	12	13	1.71	-081	25.58	-081	GLOR	UNIT	DL	0	3
1337	LOAD	Z	13	14	1.71	-081	25.58	-081	GLOR	UNIT	DL	0	3
1338	LOAD	Z	14	15	1.71	-081	25.58	-081	GLOR	UNIT	DL	0	3
1339	LOAD	Z	15	10	1.71	-081	25.58	-081	GLOR	UNIT	DL	0	3
1340	LOAD	Z	11	13	1.41	-047	26.17	-047	GLOR	UNIT	DL	0	3
1341	LOAD	Z	13	15	1.41	-047	26.17	-047	GLOR	UNIT	DL	0	3
1342	LOAD	Z	15	11	1.41	-047	26.17	-047	GLOR	UNIT	DL	0	3
1343	LOAD	Z	22	23	1.71	-081	20.96	-081	GLOR	UNIT	DL	0	3
1344	LOAD	Z	23	24	1.71	-081	20.96	-081	GLOR	UNIT	DL	0	3
1345	LOAD	Z	24	25	1.71	-081	20.96	-081	GLOR	UNIT	DL	0	3
1346	LOAD	Z	25	26	1.71	-081	20.96	-081	GLOR	UNIT	DL	0	3
1347	LOAD	Z	26	27	1.71	-081	20.96	-081	GLOR	UNIT	DL	0	3
1348	LOAD	Z	27	22	1.71	-081	20.96	-081	GLOR	UNIT	DL	0	3
1349	LOAD	Z	23	25	1.41	-047	21.55	-047	GLOR	UNIT	DL	0	3
1350	LOAD	Z	25	27	1.41	-047	21.55	-047	GLOR	UNIT	DL	0	3
1351	LOAD	Z	27	23	1.41	-047	21.55	-047	GLOR	UNIT	DL	0	3
1352	LOAD	Z	34	35	1.71	-057	16.35	-057	GLOR	UNIT	DL	0	3
1353	LOAD	Z	35	36	1.71	-057	16.35	-057	GLOR	UNIT	DL	0	3
1354	LOAD	Z	36	37	1.71	-057	16.35	-057	GLOR	UNIT	DL	0	3
1355	LOAD	Z	37	38	1.71	-057	26.80	-057	GLOR	UNIT	DL	0	3
1356	LOAD	Z	38	39	1.71	-057	26.80	-057	GLOR	UNIT	DL	0	3
1357	LOAD	Z	39	34	1.71	-057	16.35	-057	GLOR	UNIT	DL	0	3
1358	LOAD	Z	35	37	1.71	-043	16.35	-043	GLOR	UNIT	DL	0	3
1359	LOAD	Z	37	39	1.71	-043	16.35	-043	GLOR	UNIT	DL	0	3
1360	LOAD	Z	39	35	1.71	-043	16.35	-043	GLOR	UNIT	DL	0	3
1361	LOAD	Z	49	50	1.71	-072	11.73	-072	GLOR	UNIT	DL	0	3
1362	LOAD	Z	50	51	1.71	-072	11.73	-072	GLOR	UNIT	DL	0	3
1363	LOAD	Z	51	52	1.71	-072	11.73	-072	GLOR	UNIT	DL	0	3
1364	LOAD	Z	52	53	1.71	-072	11.73	-072	GLOR	UNIT	DL	0	3
1365	LOAD	Z	53	54	1.71	-072	11.73	-072	GLOR	UNIT	DL	0	3
1366	LOAD	Z	54	49	1.71	-072	11.73	-072	GLOR	UNIT	DL	0	3
1367	LOAD	Z	50	52	1.71	-057	11.73	-057	GLOR	UNIT	DL	0	3
1368	LOAD	Z	52	54	1.71	-057	11.72	-057	GLOR	UNIT	DL	0	3
1369	LOAD	Z	54	50	1.71	-057	11.73	-057	GLOR	UNIT	DL	0	3



1370	LOAD	Z	11	22	1.71	-.072	34.90	-.072	GLOR	UNITF	DL	0	3
1371	LOAD	Z	11	24	1.71	-.072	36.90	-.072	GLOR	UNITF	DL	0	3
1372	LOAD	Z	13	24	1.71	-.072	36.89	-.072	GLOR	UNITF	DL	0	3
1373	LOAD	Z	13	26	1.71	-.072	36.90	-.072	GLOR	UNITF	DL	0	3
1374	LOAD	Z	15	26	1.71	-.072	36.89	-.072	GLOR	UNITF	DL	0	3
1375	LOAD	Z	15	22	1.71	-.072	36.89	-.072	GLOR	UNITF	DL	0	3
1376	LOAD	Z	22	36	2.42	-.112	44.76	-.112	GLOR	UNITF	DL	0	3
1377	LOAD	Z	24	34	2.42	-.112	50.96	-.112	GLOR	UNITF	DL	0	3
1378	LOAD	Z	24	34	2.42	-.112	44.76	-.112	GLOR	UNITF	DL	0	3
1379	LOAD	Z	34	49	2.42	-.112	42.61	-.112	GLOR	UNITF	DL	0	3
1380	LOAD	Z	34	51	2.42	-.112	51.89	-.112	GLOR	UNITF	DL	0	3
1381	LOAD	Z	34	53	2.42	-.112	42.60	-.112	GLOR	UNITF	DL	0	3
1382	LOAD	Z	4	7	0.00	-.148	2.40	-.148	GLOR	UNITF	DL	0	3
1383	LOAD	Z	7	10	0.00	-.148	2.50	-.148	GLOR	UNITF	DL	0	3
1384	LOAD	Z	5	8	0.00	-.148	2.40	-.148	GLOR	UNITF	DL	0	3
1385	LOAD	Z	8	12	0.00	-.148	2.50	-.148	GLOR	UNITF	DL	0	3
1386	LOAD	Z	6	9	0.00	-.148	2.40	-.148	GLOR	UNITF	DL	0	3
1387	LOAD	Z	9	14	0.00	-.148	2.50	-.148	GLOR	UNITF	DL	0	3
1388	LOAD	Z	16	19	0.00	-.148	2.40	-.148	GLOR	UNITF	DL	0	3
1389	LOAD	Z	19	22	0.00	-.148	2.50	-.148	GLOR	UNITF	DL	0	3
1390	LOAD	Z	17	20	0.00	-.148	2.40	-.148	GLOR	UNITF	DL	0	3
1391	LOAD	Z	20	24	0.00	-.148	2.50	-.148	GLOR	UNITF	DL	0	3
1392	LOAD	Z	18	21	0.00	-.148	2.40	-.148	GLOR	UNITF	DL	0	3
1393	LOAD	Z	21	26	0.00	-.148	2.50	-.148	GLOR	UNITF	DL	0	3
1394	LOAD	Z	28	31	0.00	-.148	2.40	-.148	GLOR	UNITF	DL	0	3
1395	LOAD	Z	31	34	0.00	-.148	2.50	-.148	GLOR	UNITF	DL	0	3
1396	LOAD	Z	29	32	0.00	-.148	2.40	-.148	GLOR	UNITF	DL	0	3
1397	LOAD	Z	32	36	0.00	-.148	2.50	-.148	GLOR	UNITF	DL	0	3
1398	LOAD	Z	30	33	0.00	-.148	2.40	-.148	GLOR	UNITF	DL	0	3
1399	LOAD	Z	33	38	0.00	-.148	2.50	-.148	GLOR	UNITF	DL	0	3
1400	LOAD	Z	43	46	0.00	-.148	2.40	-.148	GLOR	UNITF	DL	0	3
1401	LOAD	Z	46	49	0.00	-.148	2.50	-.148	GLOR	UNITF	DL	0	3
1402	LOAD	Z	44	47	0.00	-.148	2.40	-.148	GLOR	UNITF	DL	0	3
1403	LOAD	Z	47	51	0.00	-.148	2.50	-.148	GLOR	UNITF	DL	0	3
1404	LOAD	Z	45	48	0.00	-.148	2.40	-.148	GLOR	UNITF	DL	0	3
1405	LOAD	Z	48	53	0.00	-.148	2.50	-.148	GLOR	UNITF	DL	0	3
1406	LOAD	Z	55	58	0.00	-.403	23.00	-.403	GLOR	UNITF	DL	0	3
1407	LOAD	Z	55	58	23.00	-.464	5.50	-.464	GLOR	UNITF	DL	0	3
1408	LOAD	Z	58	61	0.00	-.464	15.00	-.464	GLOR	UNITF	DL	0	3
1409	LOAD	Z	61	71	0.00	-.464	15.00	-.464	GLOR	UNITF	DL	0	3
1410	LOAD	Z	56	59	0.00	-.403	23.00	-.403	GLOR	UNITF	DL	0	3
1411	LOAD	Z	56	59	23.00	-.464	5.50	-.464	GLOR	UNITF	DL	0	3
1412	LOAD	Z	59	64	0.00	-.464	15.00	-.464	GLOR	UNITF	DL	0	3
1413	LOAD	Z	64	72	0.00	-.464	15.00	-.464	GLOR	UNITF	DL	0	3
1414	LOAD	Z	57	60	0.00	-.403	23.00	-.403	GLOR	UNITF	DL	0	3
1415	LOAD	Z	57	60	23.00	-.464	5.50	-.464	GLOR	UNITF	DL	0	3
1416	LOAD	Z	60	70	0.00	-.464	5.00	-.464	GLOR	UNITF	DL	0	3
1417	LOAD	Z	70	67	0.00	-.464	9.00	-.464	GLOR	UNITF	DL	0	3
1418	LOAD	Z	67	76	0.00	-.464	4.00	-.464	GLOR	UNITF	DL	0	3
1419	LOAD	Z	76	75	0.00	-.464	11.00	-.464	GLOR	UNITF	DL	0	3
1420	LOAD	Z	58	59	1.71	-.065	25.58	-.065	GLOR	UNITF	DL	0	3
1421	LOAD	Z	59	60	1.71	-.065	25.58	-.065	GLOR	UNITF	DL	0	3
1422	LOAD	Z	60	61	1.71	-.065	25.58	-.065	GLOR	UNITF	DL	0	3
1423	LOAD	Z	59	61	1.71	-.065	29.23	-.065	GLOR	UNITF	DL	0	3
1424	LOAD	Z	60	64	1.71	-.065	29.23	-.065	GLOR	UNITF	DL	0	3
1425	LOAD	Z	58	67	1.71	-.065	29.23	-.065	GLOR	UNITF	DL	0	3



1426	LOAD Z	70	66	1.59	-0.19	10.27	-0.19	GLOR UNIF	DL 0 3
1427	LOAD Z	70	66	1.59	-0.19	10.27	-0.19	GLOR UNIF	DL 0 3
1428	LOAD Z	76	77	1.71	-0.50	14.78	-0.50	GLOR UNIF	DL 0 3
1429	LOAD Z	76	78	1.71	-0.50	14.78	-0.50	GLOR UNIF	DL 0 3
1430	LOAD Z	61	62	0.00	-0.55	4.50	-0.55	GLOR UNIF	DL 0 3
1431	LOAD Z	62	63	0.00	-0.55	4.50	-0.55	GLOR UNIF	DL 0 3
1432	LOAD Z	63	64	0.00	-0.55	4.50	-0.55	GLOR UNIF	DL 0 3
1433	LOAD Z	64	65	0.00	-0.55	4.75	-0.55	GLOR UNIF	DL 0 3
1434	LOAD Z	65	67	0.00	-0.55	23.25	-0.55	GLOR UNIF	DL 0 3
1435	LOAD Z	67	69	0.00	-0.55	20.25	-0.55	GLOR UNIF	DL 0 3
1436	LOAD Z	69	61	0.00	-0.55	4.75	-0.55	GLOR UNIF	DL 0 3
1437	LOAD Z	63	65	0.00	-0.24	7.50	-0.24	GLOR UNIF	DL 0 3
1438	LOAD Z	65	66	0.00	-0.24	17.61	-0.24	GLOR UNIF	DL 0 3
1439	LOAD Z	66	67	0.00	-0.24	10.00	-0.24	GLOR UNIF	DL 0 3
1440	LOAD Z	67	68	0.00	-0.24	10.00	-0.24	GLOR UNIF	DL 0 3
1441	LOAD Z	68	69	0.00	-0.24	17.61	-0.24	GLOR UNIF	DL 0 3
1442	LOAD Z	69	62	0.00	-0.24	7.50	-0.24	GLOR UNIF	DL 0 3
1443	LOAD Z	71	73	0.00	-0.55	3.00	-0.55	GLOR UNIF	DL 0 3
1444	LOAD Z	71	72	0.00	-0.55	29.00	-0.55	GLOR UNIF	DL 0 3
1445	LOAD Z	72	74	0.00	-0.55	3.00	-0.55	GLOR UNIF	DL 0 3
1446	LOAD Z	71	81	0.00	-0.55	5.00	-0.55	GLOR UNIF	DL 0 3
1447	LOAD Z	71	77	0.00	-0.55	25.11	-0.55	GLOR UNIF	DL 0 3
1448	LOAD Z	72	82	0.00	-0.55	5.00	-0.55	GLOR UNIF	DL 0 3
1449	LOAD Z	72	78	0.00	-0.55	5.00	-0.55	GLOR UNIF	DL 0 3
1450	LOAD Z	72	78	0.00	-0.55	25.11	-0.55	GLOR UNIF	DL 0 3
1451	LOAD Z	78	84	0.00	-0.55	5.00	-0.55	GLOR UNIF	DL 0 3
1452	LOAD Z	77	79	0.00	-0.55	3.00	-0.55	GLOR UNIF	DL 0 3
1453	LOAD Z	77	75	0.00	-0.55	14.50	-0.55	GLOR UNIF	DL 0 3
1454	LOAD Z	75	78	0.00	-0.55	14.50	-0.55	GLOR UNIF	DL 0 3
1455	LOAD Z	78	80	0.00	-0.55	3.00	-0.55	GLOR UNIF	DL 0 3
1456	LOAD Z	71	75	0.00	-0.16	29.00	-0.16	GLOR UNIF	DL 0 3
1457	LOAD Z	72	75	0.00	-0.16	29.00	-0.16	GLOR UNIF	DL 0 3
1458	LOAD Z	40	49	89	242			GLOR UNIF	RUAT LRG
1459	LOAD Z	41	51	89	242			GLOR UNIF	RUAT LRG
1460	LOAD Z	55	58	242	406			GLOR UNIF	STAIRS
1461	LOAD Z	56	59	242	406			GLOR UNIF	STAIRS
1462	LOAD Z	61	62		-13			GLOR UNIF	ADD DEAD
1463	LOAD Z	62	63		-13			GLOR UNIF	ADD DEAD
1464	LOAD Z	63	64		-13			GLOR UNIF	ADD DEAD
1465	LOAD Z	64	65		-13			GLOR UNIF	ADD DEAD
1466	LOAD Z	65	67		-13			GLOR UNIF	ADD DEAD
1467	LOAD Z	67	69		-13			GLOR UNIF	ADD DEAD
1468	LOAD Z	69	61		-13			GLOR UNIF	ADD DEAD
1469	LOAD Z	61	71	15	-793			GLOR UNIF	ADD DEAD
1470	LOAD Z	64	72	15	-793			GLOR UNIF	ADD DEAD
1471	LOAD Z	76	75	15	-793			GLOR UNIF	ADD DEAD
1472	LOAD Z	61	62		-86			GLOR UNIF	LIVE LOS
1473	LOAD Z	62	63		-86			GLOR UNIF	LIVE LOS
1474	LOAD Z	63	64		-86			GLOR UNIF	LIVE LOS
1475	LOAD Z	64	65		-86			GLOR UNIF	LIVE LOS
1476	LOAD Z	65	67		-86			GLOR UNIF	LIVE LOS
1477	LOAD Z	67	69		-86			GLOR UNIF	LIVE LOS
1478	LOAD Z	69	61		-86			GLOR UNIF	LIVE LOS
1479	LOAD Z	61	71		-86			GLOR UNIF	LIVE LOS
1480	LOAD Z	64	72		-86			GLOR UNIF	LIVE LOS
1481	LOAD Z	76	75		-86			GLOR UNIF	LIVE LOS



JYJOCME 04/27/76 UNITED COMPUTING* 47, APRX/51, 4,0,25

09.53.23SDATAEDT,CM100,1200,PT.				
09.53.23SFL	64	0.000		
09.53.23SAC3000CRA0023,277710GCC 3H				
09.53.23, 04/27/76, JYJOCME				
09.53.24SFL	3392	0.000		
09.53.24GET,DATAEDT(LIBRARY)				
09.53.24,READY - DATAEDT				
09.53.24,GET,TAPE9=S771C1.				
09.53.26,READY - S771C1				
09.53.26,SFL,31000.				
09.53.26SFL	4096	0.001	0	0.
09.53.26SFL	225		2	
09.53.26SFL	12800	0.001		
09.53.26,MAP,OFF.				
09.53.26,REDUCE.				
09.53.26SFL	256	0.003		
09.53.27,DATAEDT.				
09.53.27SFLS	12800	0.003		
09.53.27SFLR	12800	0.004	126	5
09.53.28SFLR	17408	0.103	4	1
09.53.28SFL RFOURTHED TO LOAD				
09.53.29SFL RFOURTHED TO EXECUTE				
09.53.29SFL	17408	0.107	3032M (12506)	17408 (4064)
09.53.32,STOP				
09.53.32,REPLACE,TAPE10=S771C2.				
09.53.34,READY - S771C2				
09.53.34,CNST.				
09.53.34SFL	4064	3.265	870	51.
09.53.34SFL	212			
09.53.35.		SERVICE UNITS=	14.9	
09.53.35.		JCR CNSTES	3.73	
09.53.35SFL	12288	3.284	7	5
09.53.35,EXIT.				
09.53.35,EXIT				
09.53.35,EXIT				
09.53.35.		*FL*	*CPU SEC.	*DISC PRUS* DISC ACC
09.53.35,AP.F.		PRUS*P.F.	ACC	*TAPE PRUS* TAPE ACC



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WASHINGTON, TEXAS
DECEMBER 2 1974
MARCH 1974

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815 2816 2817 2818

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	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
5	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
6	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
7	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
8	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
9	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
10	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
11	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
12	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
13	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
14	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
15	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
16	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
17	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
18	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
19	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
20	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
21	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
22	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
23	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
24	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
25	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
26	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
27	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
28	14	20	25	35	50	62.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70
29																	

[illegible][illegible][illegible][illegible]

Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1970	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100

[illegible]

3	100
4	176
5	176

7	196
8	195
9	193
10	192

[illegible]

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03	100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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LINE NO. 105

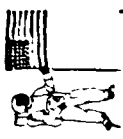
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96	MEMBER	2	5	810	2	0000
95	MEMBER	5	17	810	2	0000
96	MEMBER	17	29	820	2	0000
97	MEMBER	20	44	820	2	0000
98	MEMBER	44	54	820	2	0000
99	MEMBER	1	6	810	3	0000
100	MEMBER	6	18	810	3	0000
101	MEMBER	18	30	820	3	0000
102	MEMBER	30	45	820	3	0000
103	MEMBER	45	57	820	3	0000
104	MEMBER	10	22	811	3	0000
105	MEMBER	22	34	811	3	0000
106	MEMBER	34	40	812	3	0000
107	MEMBER	40	49	812	3	0000
108	MEMBER	49	54	812	3	0000
109	MEMBER	12	24	811	3	0000
110	MEMBER	24	34	811	3	0000
111	MEMBER	34	41	812	3	0000
112	MEMBER	41	51	812	3	0000
113	MEMBER	51	54	812	3	0000
114	MEMBER	14	24	811	3	0000
115	MEMBER	24	34	811	3	0000
116	MEMBER	34	42	812	3	0000
117	MEMBER	42	53	812	3	0000
118	MEMBER	53	57	812	3	0000
119	MEMBER	10	11	802	3	0000
120	MEMBER	11	12	802	3	0000
121	MEMBER	12	13	802	3	0000
122	MEMBER	13	14	802	3	0000
123	MEMBER	14	15	802	3	0000
124	MEMBER	15	16	802	3	0000
125	MEMBER	11	13	804	3	0000
126	MEMBER	13	15	804	3	0000
127	MEMBER	15	11	804	3	0000
128	MEMBER	22	23	802	3	0000
129	MEMBER	23	24	802	3	0000
130	MEMBER	24	25	802	3	0000
131	MEMBER	25	26	802	3	0000
132	MEMBER	26	27	802	3	0000
133	MEMBER	27	28	802	3	0000
134	MEMBER	28	29	804	3	0000
135	MEMBER	29	27	804	3	0000
136	MEMBER	27	23	804	3	0000
137	MEMBER	30	35	805	3	0000
138	MEMBER	35	36	805	3	0000
139	MEMBER	36	37	805	3	0000
140	MEMBER	37	38	805	3	0000
141	MEMBER	38	39	805	3	0000
142	MEMBER	39	30	805	3	0000

[illegible]



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3	5	0	5	0	5	0	5	0
4	0	5	0	5	0	5	0	5
5	5	0	5	0	5	0	5	0
6	0	5	0	5	0	5	0	5
7	5	0	5	0	5	0	5	0
8	0	5	0	5	0	5	0	5
9	5	0	5	0	5	0	5	0
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13	5	0	5	0	5	0	5	0
14	0	5	0	5	0	5	0	5
15	5	0	5	0	5	0	5	0
16	0	5	0	5	0	5	0	5
17	5	0	5	0	5	0	5	0
18	0	5	0	5	0	5	0	5
19	5	0	5	0	5	0	5	0
20	0	5	0	5	0	5	0	5
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27	5	0	5	0	5	0	5	0
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45	5	0	5	0	5	0	5	0
46	0	5	0	5	0	5	0	5
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55	5	0	5	0	5	0	5	0
56	0	5	0	5	0	5	0	5
57	5	0	5	0	5			

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PAGE

SEALING

LINE NO. 1 2 3 4 5 6 7 8

293	JOINT	53	0	1749	9600	3 LEVEL
294	JOINT	54	757	437	9600	3 LEVEL
295	JOINT	55	1450	-437	10050	AP LEVEL
296	JOINT	56	-1450	-437	10050	WP LEVEL
297	JOINT	57	0	1674	10050	WP LEVEL
298	JOINT	58	1450	-437	12900	ST BRACE
299	JOINT	59	-1450	-437	12900	ST BRACE
300	JOINT	60	0	1674	12900	FOOT DECK
301	JOINT	61	1450	-437	14400	FOOT DECK
302	JOINT	62	1000	-437	14400	FOOT DECK
303	JOINT	63	-1000	-837	14400	FOOT DECK
304	JOINT	64	-1450	-437	14400	FOOT DECK
305	JOINT	65	-1000	-437	14400	FOOT DECK
306	JOINT	66	-1000	1674	14400	FOOT DECK
307	JOINT	67	0	1674	14400	FOOT DECK
308	JOINT	68	1000	1674	14400	FOOT DECK
309	JOINT	69	1000	-437	14400	BRACE PT
310	JOINT	70	0	1674	13500	TOP DECK
311	JOINT	71	1450	-437	15900	TOP DECK
312	JOINT	72	-1450	-437	15900	TOP DECK
313	JOINT	73	1750	-437	15900	TOP DECK
314	JOINT	74	-1750	-437	15900	TOP DECK
315	JOINT	75	0	1674	15900	TOP DECK
316	JOINT	76	0	1674	14800	BRACE PT
317	JOINT	77	1450	1674	15900	TOP DECK
318	JOINT	78	-1450	1674	15900	TOP DECK
319	JOINT	79	1750	1674	15900	TOP DECK
320	JOINT	80	-1750	1674	15900	TOP DECK
321	JOINT	81	1450	-1337	15900	TOP DECK
322	JOINT	82	-1450	-1337	15900	TOP DECK
323	JOINT	83	1450	2174	15900	TOP DECK
324	JOINT	84	-1450	2174	15900	TOP DECK
325	END					



*** C O N F I D E N T I A L ***

MASS COEF

1.0000

TANG DRAG COEF

0.0000

NORMAL DRAG COEF

1.0000

DIAMETER

IN

41.000



SOFTILE ACHR STRUCTURE -- U.S. NAVY (16-IN. DIAMETER PILING) -- C.CHERN

INPUT UNITS
....ENGLISH
OUTPUT UNITS
....ENGLISH



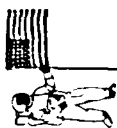


*** WAVE POSITION SUMMARY REPORT ***

WAVE ANGLE = 90.00

LOAD CONDITION 1

TRIAL NO.	DIST. TO CREST FT	PHASE ANGLE WAVE TO STRUC. (DEG)	S H F A R			MULTLINE MOMENT			VERTICAL FORCE		
			X	Y	KIPS	RSLT	X	Y	RSLT	Z	KIPS
1	-20.0	10.89	.5	728.9	728.9	728.9	-60287.	155.	60287.	7.4	
2	-15.0	8.17	-1.9	751.8	751.8	751.8	-63523.	-164.	63523.	2.5	
3	-10.0	5.45	-2.8	757.5	757.5	757.5	-64911.	-288.	64912.	4.4	
4	-5.0	2.72	-2.7	757.5	757.5	757.5	-65027.	-273.	65028.	4.4	
5	0.0	-0.00	-2.2	751.6	751.6	751.6	-64799.	-193.	64800.	4.2	
6	5.0	-2.72	-1.6	729.0	729.0	729.0	-62502.	-102.	62502.	3.8	
7	10.0	-5.45	-1.0	709.7	709.7	709.7	-60829.	-14.	60829.	3.7	



*** I N A N S U M M A R Y R E P O R T ***

WAVE NUMBER = 1

WAVE DIRECTION = 90.000

X SHEAR FORCE =

-2.7309 KIPS

Y SHEAR FORCE =

757.4846 KIPS

RESULTANT SHEAR FORCE =

757.4895 KIPS

X MIDLING MOMENT =

-65027.4029 FT-KIPS

Y MIDLING MOMENT =

-273.2350 FT-KIPS

RESULTANT MIDLING MOMENT =

65028.0670 FT-KIPS

Z VERTICAL FORCE =

4.3589 KIPS



*** WAVE POSITION SUMMARY REPORT ***

LOAD CONDITION 2

WAVE ANGLE = 270.00

TRIAL NO.	DIST. FT	PHASE ANGLE, WAVE TO CREST	S H F A R		MULTILINE MOMENTS		VERTICAL FORCE	
			FT	IN	FT-KIPS	IN-KIPS	KIPS	Z
1	-20.0	10.89	-733.7	733.7	60886.	60886.	-1.1	
2	-15.0	8.17	-708.9	708.9	62924.	62924.	-0.4	
3	-10.0	5.45	-761.3	761.3	64825.	64825.	-0.4	
4	-5.0	2.72	-757.1	757.1	64668.	64668.	-0.7	
5	0.0	-0.00	-757.1	757.1	65243.	65243.	-0.9	
6	5.0	-2.72	-739.4	739.4	63568.	63568.	-0.9	
7	10.0	-5.45	-717.2	717.2	61498.	61498.	-0.4	



*** I N A N S U M M A R Y R E P O R T ***

WAVE NUMBER = 2

WAVE DIRECTION = 270.000

X SHEAR FORCE =

1.4179 KIPS

Y SHEAR FORCE =

-757.1200 KIPS

RESULTANT SHEAR FORCE =

757.1213 KIPS

X MUDDLINE MOMENT =

65243.4242 FT-KIPS

Y MUDDLINE MOMENT =

126.2453 FT-KIPS

RESULTANT MUDDLINE MOMENT =

65243.5443 FT-KIPS

Z VERTICAL FORCE =

- .9087 KIPS

**** DEAD LOAD REPORT ****

LOAD CONDITION 1

MEAN WATER DEPTH = 123.500 FT

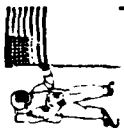
STRUCTURE DEAD LOAD =

-035,8654 KIPS





MARCH 1974



SFALPAG-2

LINE NO.	1	2	3	4	5	6	7	8
43	MEMBER	17	29	P20				F 0000 2
44	MEMBER	20	40	P20				F 0000 2
45	MEMBER	44	56	P20				F 0000 2
46	MEMBER	3	6	P10				F 0000 3
47	MEMBER	6	18	P10				F 0000 3
48	MEMBER	18	30	P20				F 0000 3
49	MEMBER	30	45	P20				F 0000 3
50	MEMBER	45	57	P20				F 0000 3
51	MEMBER	10	22	JL1				F 4000
52	MEMBER	22	34	JL1				F 4000
53	MEMBER	34	40	JL2				F 4100
54	MEMBER	40	49	JL2				F 4100
55	MEMBER	49	55	JL2				F 4000
56	MEMBER	12	24	JL1				F 4000
57	MEMBER	24	36	JL1				F 4100
58	MEMBER	36	41	JL2				F 4100
59	MEMBER	41	51	JL2				F 4000
60	MEMBER	51	56	JL2				F 4000
61	MEMBER	14	26	JL1				F 4100
62	MEMBER	26	38	JL1				F 4000
63	MEMBER	38	42	JL2				F 4100
64	MEMBER	42	53	JL2				F 4100
65	MEMBER	53	57	JL2				F 4100
66	MEMBER	10	11	HR2				1800
67	MEMBER	11	12	HR2				1800
68	MEMBER	12	13	HR2				1800
69	MEMBER	13	14	HR2				1800
70	MEMBER	14	15	HR2				1800
71	MEMBER	15	10	HR2				1800
72	MEMBER	11	13	HR4				1800
73	MEMBER	13	15	HR4				1800
74	MEMBER	15	11	HR4				1800
75	MEMBER	22	23	HR2				1800
76	MEMBER	23	24	HR2				1800
77	MEMBER	24	25	HR2				1800
78	MEMBER	25	26	HR2				1800
79	MEMBER	26	27	HR2				1800
80	MEMBER	27	22	HR2				1800
81	MEMBER	23	25	HR4				1800
82	MEMBER	25	27	HR4				1800
83	MEMBER	27	23	HR4				1275
84	MEMBER	34	35	HR5				1275
85	MEMBER	35	36	HR5				1275
86	MEMBER	36	37	HR5				1275
87	MEMBER	37	38	HR5				1275
88	MEMBER	38	39	HR5				1275
89	MEMBER	39	30	HR5				1275
90	MEMBER	35	37	HR4				1275
91	MEMBER	37	39	HR6				1275
92	MEMBER	30	35	HR6				1275



LINE NO.	1	2	3	4	5	6	7
93	MEMBER	49	50	ARR			1600
94	MEMBER	50	51	ARR			1600
95	MEMBER	51	52	ARR			1600
96	MEMBER	52	53	ARR			1600
97	MEMBER	53	54	ARR			1600
98	MEMBER	54	49	ARR			1600
99	MEMBER	50	52	ARR			1275
100	MEMBER	52	54	ARR			1275
101	MEMBER	54	50	ARR			1600
102	MEMBER	11	22	ARR			1600
103	MEMBER	11	24	ARR			1600
104	MEMBER	13	24	ARR			1600
105	MEMBER	13	26	ARR			1600
106	MEMBER	15	26	ARR			1600
107	MEMBER	15	22	ARR			1600
108	MEMBER	22	36	ARR			2000
109	MEMBER	20	34	ARR			2000
110	MEMBER	24	34	ARR			2000
111	MEMBER	34	49	ARR			2000
112	MEMBER	34	51	BRI			2000
113	MEMBER	34	53	ARR			2000
114	MEMBER	4	7	MAN	1111		F 0000
115	MEMBER	7	10	MAN			F 0000
116	MEMBER	5	8	MAN	1111		F 0000
117	MEMBER	A	12	MAN			F 0000
118	MEMBER	6	9	MAN	1111		F 0000
119	MEMBER	9	14	MAN			F 0000
120	MEMBER	16	19	MAN	1111		F 0000
121	MEMBER	19	22	MAN			F 0000
122	MEMBER	17	20	MAN	1111		F 0000
123	MEMBER	20	24	MAN			F 0000
124	MEMBER	1A	21	MAN	1111		F 0000
125	MEMBER	21	26	MAN			F 0000
126	MEMBER	2A	31	MAN	1111		F 0000
127	MEMBER	31	34	MAN			F 0000
128	MEMBER	29	32	MAN	1111		F 0000
129	MEMBER	32	34	MAN			F 0000
130	MEMBER	30	33	MAN	1111		F 0000
131	MEMBER	33	34	MAN			F 0000
132	MEMBER	43	46	MAN	1111		F 0000
133	MEMBER	44	49	MAN			F 0000
134	MEMBER	44	47	MAN	1111		F 0000
135	MEMBER	47	51	MAN			F 0000
136	MEMBER	45	44	MAN	1111		F 0000
137	MEMBER	44	53	MAN			F 0000
138	MEMBER	55	54	STL			3600
139	MEMBER	54	61	STL			3600
140	MEMBER	61	71	STL			3600
141	MEMBER	54	59	STL			3600
142	MEMBER	59	64	STL			3600



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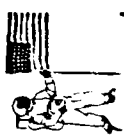
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143	MEMBER	64	72	STL				3600
144	MEMBER	57	60	STL				3600
145	MEMBER	60	70	STL				3600
146	MEMBER	70	67	STL				3600
147	MEMBER	67	74	STL				3600
148	MEMBER	74	75	STL				3600
149	MEMBER	58	59	RRS				1275
150	MEMBER	59	60	RRS				1275
151	MEMBER	60	58	RRS				1275
152	MEMBER	59	61	RRS				1275
153	MEMBER	60	60	RRS				1275
154	MEMBER	58	67	RRS				1275
155	MEMBER	70	66	RR7				6.625
156	MEMBER	70	68	RR7				6.625
157	MEMBER	76	77	RR6				1275
158	MEMBER	76	78	RR6				1275
159	MEMBER	61	62	W1A				0000
160	MEMBER	62	63	W1A				0000
161	MEMBER	63	64	W1A				0000
162	MEMBER	64	65	W1A				0000
163	MEMBER	65	67	W1A				0000
164	MEMBER	67	69	W1A				0000
165	MEMBER	69	61	W1A				0000
166	MEMBER	63	65	W0A				0000
167	MEMBER	65	66	W0A				0000
168	MEMBER	64	67	W0A				0000
169	MEMBER	67	68	W0A				0000
170	MEMBER	68	69	W0A				0000
171	MEMBER	69	62	W0A				0000
172	MEMBER	71	73	W1A				0000
173	MEMBER	71	72	W1A				0000
174	MEMBER	72	78	W1A				0000
175	MEMBER	71	81	W1A				0000
176	MEMBER	71	77	W1A				0000
177	MEMBER	77	83	W1A				0000
178	MEMBER	72	82	W1A				0000
179	MEMBER	72	78	W1A				0000
180	MEMBER	78	84	W1A				0000
181	MEMBER	77	79	W1A				0000
182	MEMBER	77	75	W1A				0000
183	MEMBER	75	78	W1A				0000
184	MEMBER	78	80	W1A				0000
185	MEMBER	71	75	W0A				0000
186	MEMBER	72	75	W0A				0000
187	JOINT							
188	JOINT	1	2087	-1725	-600			PTING A
189	JOINT	2	-2987	-1725	-600			PTING F
190	JOINT	3	000	3409	-600			PTING C
191	JOINT	4	2910	-1684	0			MULTI F
192	JOINT	5	-2910	-1684	0			MULTI F



LINE NO.	1	2	3	4	5	6	7	8
193	JOINT	6	0	3350	0			MUNDL TIF
194	JOINT	7	2900	-1924	0			MUNDL TIF
195	JOINT	8	-2000	-1924	0			MUNDL TIF
196	JOINT	9	0	3590	0			MUNDL TIF
197	JOINT	10	2900	-1674	0			MUNDL TIF
198	JOINT	11	0	-1674	0			MUNDL TIF
199	JOINT	12	-20	-1674	0			MUNDL TIF
200	JOINT	13	-1450	837	0			MUNDL TIF
201	JOINT	14	0	3549	0			MUNDL TIF
202	JOINT	15	1450	837	0			MUNDL TIF
203	JOINT	16	2047	-1417	3200			1 LEVEL
204	JOINT	17	-2047	-1417	3200			1 LEVEL
205	JOINT	18	0	2825	3200			1 LEVEL
206	JOINT	19	2438	-1657	3200			1 LEVEL
207	JOINT	20	-2438	-1657	3200			1 LEVEL
208	JOINT	21	0	3065	3200			1 LEVEL
209	JOINT	22	2438	-1407	3200			1 LEVEL
210	JOINT	23	0	-1407	3200			1 LEVEL
211	JOINT	24	-2438	-1407	3200			1 LEVEL
212	JOINT	25	-1219	704	3200			1 LEVEL
213	JOINT	26	0	2815	3200			1 LEVEL
214	JOINT	27	1219	704	3200			1 LEVEL
215	JOINT	28	1987	-1151	6400			2 LEVEL
216	JOINT	29	-1987	-1151	6400			2 LEVEL
217	JOINT	30	0	3437	6400			2 LEVEL
218	JOINT	31	1977	-1391	6400			2 LEVEL
219	JOINT	32	-1977	-1391	6400			2 LEVEL
220	JOINT	33	0	3677	6400			2 LEVEL
221	JOINT	34	1977	-1141	6400			2 LEVEL
222	JOINT	35	0	-1141	6400			2 LEVEL
223	JOINT	36	-1977	-1141	6400			2 LEVEL
224	JOINT	37	-988	571	6400			2 LEVEL
225	JOINT	38	0	3427	6400			2 LEVEL
226	JOINT	39	968	571	6400			2 LEVEL
227	JOINT	40	1770	-1040	7800			HOAT LOG
228	JOINT	41	-1774	-1040	7800			HOAT LOG
229	JOINT	42	0	2880	7800			3 LEVEL
230	JOINT	43	1525	-885	9600			3 LEVEL
231	JOINT	44	-1525	-885	9600			3 LEVEL
232	JOINT	45	0	1759	9600			3 LEVEL
233	JOINT	46	1515	-1125	9600			3 LEVEL
234	JOINT	47	-1515	-1125	9600			3 LEVEL
235	JOINT	48	0	1949	9600			3 LEVEL
236	JOINT	49	1515	-875	9600			3 LEVEL
237	JOINT	50	0	-875	9600			3 LEVEL
238	JOINT	51	-1515	-875	9600			3 LEVEL
239	JOINT	52	-757	837	9600			3 LEVEL
240	JOINT	53	0	1749	9600			3 LEVEL
241	JOINT	54	757	437	9600			3 LEVEL
242	JOINT	55	1450	-837	10050			MP LEVEL



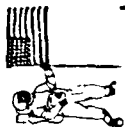
LINE NO.	1	2	3	4	5	6	7	8
243	JOINT	56	-1450	-837	10050			
244	JOINT	57	0	1674	10050			
245	JOINT	58	1450	-837	12000			
246	JOINT	59	-1450	-837	12000			
247	JOINT	60	0	1674	12000			
248	JOINT	61	1450	-837	14000			
249	JOINT	62	1000	-837	14000			
250	JOINT	63	-1000	-837	14000			
251	JOINT	64	-1450	-837	14000			
252	JOINT	65	-1000	-837	14000			
253	JOINT	66	-1000	1674	14000			
254	JOINT	67	0	1674	14000			
255	JOINT	68	1000	1674	14000			
256	JOINT	69	1000	-087	14000			
257	JOINT	70	0	1674	15000			
258	JOINT	71	1450	-837	15000			
259	JOINT	72	-1450	-837	15000			
260	JOINT	73	1750	-837	15000			
261	JOINT	74	-1750	-837	15000			
262	JOINT	75	0	1674	15000			
263	JOINT	76	0	1674	14000			
264	JOINT	77	1450	1674	15000			
265	JOINT	78	-1450	1674	15000			
266	JOINT	79	1750	1674	15000			
267	JOINT	80	-1750	1674	15000			
268	JOINT	81	1450	-1337	15000			
269	JOINT	82	-1450	-1337	15000			
270	JOINT	83	1450	2174	15000			
271	JOINT	84	-1450	2174	15000			
272	LOAD							
273	LOADEN	1						
274	LOAD Y	43	55	4.08	345			
275	LOAD X	43	55					
276	LOAD Y	44	56	4.08	345			
277	LOAD X	44	56					
278	LOAD Y	45	57	4.07	345			
279	LOAD X	45	57					
280	LOAD Y	43	55	4.08	1111			
281	LOAD X	43	55					
282	LOAD Y	44	56	4.08	1111			
283	LOAD X	44	56					
284	LOAD Y	45	57	4.07	1111			
285	LOAD X	45	57					
286	LOAD Y	10	22	0.00	1	10.01	1	
287	LOAD X	10	22	0.00	47	10.01	48	
288	LOAD Z	10	22	0.00	04	10.01	04	
289	LOAD X	10	22	10.01	1	10.01	1	
290	LOAD Y	10	22	10.01	48	10.01	50	
291	LOAD Z	10	22	10.01	04	10.01	04	
292	LOAD X	10	22	21.63	1	10.01	1	



PAGE

SFALOAD=2

LINE NO.	1	2	3	4	5	6	7	8
293	LOAD	Y	10	22	21.63	50	10.81	53
294	LOAD	Z	10	22	21.63	04	10.81	04
295	LOAD	X	22	34	0.00	1	10.81	1
296	LOAD	Y	22	34	0.00	53	10.81	57
297	LOAD	Z	22	34	0.00	04	10.81	05
298	LOAD	X	22	34	10.81	1	10.81	1
299	LOAD	Y	22	34	10.81	57	10.81	60
300	LOAD	Z	22	34	10.81	05	10.81	05
301	LOAD	X	22	34	21.63	1	10.81	1
302	LOAD	Y	22	34	21.63	64	10.81	71
303	LOAD	Z	22	34	21.63	05	10.81	04
304	LOAD	X	34	40	0.00	1	4.73	1
305	LOAD	Y	34	40	0.00	73	4.73	77
306	LOAD	Z	34	40	0.00	05	4.73	05
307	LOAD	X	34	40	4.73	1	4.73	1
308	LOAD	Y	34	40	4.73	77	4.73	82
309	LOAD	Z	34	40	4.73	05	4.73	06
310	LOAD	X	34	40	9.45	1	4.73	1
311	LOAD	Y	34	40	9.45	82	4.73	88
312	LOAD	Z	34	40	9.45	06	4.73	06
313	LOAD	X	40	49	0.00	1	6.09	1
314	LOAD	Y	40	49	0.00	88	6.09	90
315	LOAD	Z	40	49	0.00	06	6.09	09
316	LOAD	X	40	49	6.09	1	6.09	1
317	LOAD	Y	40	49	6.09	90	6.09	106
318	LOAD	Z	40	49	6.09	09	6.09	09
319	LOAD	X	40	49	12.17	1	6.09	1
320	LOAD	Y	40	49	12.17	106	6.09	118
321	LOAD	Z	40	49	12.17	09	6.09	11
322	LOAD	X	49	55	0.00	1	1.52	1
323	LOAD	Y	49	55	0.00	118	1.52	121
324	LOAD	Z	49	55	0.00	10	1.52	10
325	LOAD	X	49	55	1.52	1	1.52	1
326	LOAD	Y	49	55	1.52	121	1.52	125
327	LOAD	Z	49	55	1.52	10	1.52	10
328	LOAD	X	49	55	3.04	1	1.52	1
329	LOAD	Y	49	55	3.04	125	1.52	124
330	LOAD	Z	49	55	3.04	10	1.52	11
331	LOAD	X	12	24	0.00	1	10.81	1
332	LOAD	Y	12	24	0.00	47	10.81	48
333	LOAD	Z	12	24	0.00	04	10.81	04
334	LOAD	X	12	24	10.81	1	10.81	1
335	LOAD	Y	12	24	10.81	48	10.81	50
336	LOAD	Z	12	24	10.81	04	10.81	04
337	LOAD	X	12	24	21.63	1	10.81	1
338	LOAD	Y	12	24	21.63	50	10.81	53
339	LOAD	Z	12	24	21.63	04	10.81	04
340	LOAD	X	24	36	0.00	1	10.81	1
341	LOAD	Y	24	36	0.00	53	10.81	57
342	LOAD	Z	24	36	0.00	04	10.81	05



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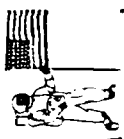
REAL TIME-2

LINE NO.	1	2	3	4	5	6	7	8
343	LOAD X	24	36	10.41	1	10.41	GLOR UNTE	1
344	LOAD Y	24	36	10.41	57	10.41	GLOR UNTE	1
345	LOAD Z	24	36	10.41	05	10.41	GLOR UNTE	1
346	LOAD X	24	36	21.63	1	10.41	GLOR UNTE	1
347	LOAD Y	24	36	21.63	64	10.41	GLOR UNTE	1
348	LOAD Z	24	36	21.63	05	10.41	GLOR UNTE	1
349	LOAD X	36	41	0.00	1	4.73	GLOR UNTE	1
350	LOAD Y	36	41	0.00	73	4.73	GLOR UNTE	1
351	LOAD Z	36	41	0.00	05	4.73	GLOR UNTE	1
352	LOAD X	36	41	4.73	1	4.73	GLOR UNTE	1
353	LOAD Y	36	41	4.73	77	4.73	GLOR UNTE	1
354	LOAD Z	36	41	4.73	05	4.73	GLOR UNTE	1
355	LOAD X	36	41	9.45	1	4.73	GLOR UNTE	1
356	LOAD Y	36	41	9.45	82	4.73	GLOR UNTE	1
357	LOAD Z	36	41	9.45	06	4.73	GLOR UNTE	1
358	LOAD X	41	51	0.00	1	6.09	GLOR UNTE	1
359	LOAD Y	41	51	0.00	88	6.09	GLOR UNTE	1
360	LOAD Z	41	51	0.00	08	6.09	GLOR UNTE	1
361	LOAD X	41	51	6.09	1	6.09	GLOR UNTE	1
362	LOAD Y	41	51	6.09	96	6.09	GLOR UNTE	1
363	LOAD Z	41	51	6.09	09	6.09	GLOR UNTE	1
364	LOAD X	41	51	12.17	1	6.09	GLOR UNTE	1
365	LOAD Y	41	51	12.17	106	6.09	GLOR UNTE	1
366	LOAD Z	41	51	12.17	09	6.09	GLOR UNTE	1
367	LOAD X	51	56	0.00	1	1.52	GLOR UNTE	1
368	LOAD Y	51	56	0.00	118	1.52	GLOR UNTE	1
369	LOAD Z	51	56	0.00	10	1.52	GLOR UNTE	1
370	LOAD X	51	56	1.52	1	1.52	GLOR UNTE	1
371	LOAD Y	51	56	1.52	121	1.52	GLOR UNTE	1
372	LOAD Z	51	56	1.52	10	1.52	GLOR UNTE	1
373	LOAD X	51	56	3.04	1	1.52	GLOR UNTE	1
374	LOAD Y	51	56	3.04	125	1.52	GLOR UNTE	1
375	LOAD Z	51	56	3.04	10	1.52	GLOR UNTE	1
376	LOAD X	14	26	0.00	50	10.41	GLOR UNTE	1
377	LOAD Y	14	26	0.00	08	10.41	GLOR UNTE	1
378	LOAD Z	14	26	10.41	51	10.41	GLOR UNTE	1
379	LOAD X	14	26	10.41	08	10.41	GLOR UNTE	1
380	LOAD Y	14	26	21.63	53	10.41	GLOR UNTE	1
381	LOAD Z	14	26	21.63	09	10.41	GLOR UNTE	1
382	LOAD X	26	38	0.00	55	10.46	GLOR UNTE	1
383	LOAD Y	26	38	0.00	11	10.46	GLOR UNTE	1
384	LOAD Z	26	38	10.46	59	10.46	GLOR UNTE	1
385	LOAD X	26	38	10.46	11	10.46	GLOR UNTE	1
386	LOAD Y	26	38	21.72	64	10.46	GLOR UNTE	1
387	LOAD Z	26	38	21.72	12	10.46	GLOR UNTE	1
388	LOAD X	38	42	0.00	65	5.01	GLOR UNTE	1
389	LOAD Y	38	42	0.00	25	5.01	GLOR UNTE	1
390	LOAD Z	38	42	5.01	69	5.01	GLOR UNTE	1
391	LOAD X	38	42	5.01	27	5.01	GLOR UNTE	1
392	LOAD Y	38	42	10.02	73	5.01	GLOR UNTE	1



SEAL-14-2

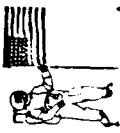
LINE NO.	1	2	3	4	5	6	7	8
393	LOAD	2	34	42	10.02	29	5.01	GLOR UNTE
394	LOAD	Y	42	53	0.00	65	7.09	GLOR UNTE
395	LOAD	Z	42	53	0.00	41	7.09	GLOR UNTE
396	LOAD	Y	42	53	7.09	71	7.09	GLOR UNTE
397	LOAD	Z	42	53	7.09	45	7.09	GLOR UNTE
398	LOAD	Y	42	53	14.17	79	7.09	GLOR UNTE
399	LOAD	Z	42	53	14.17	49	7.09	GLOR UNTE
400	LOAD	Y	53	57	0.00	120	1.52	GLOR UNTE
401	LOAD	Z	53	57	0.00	20	1.52	GLOR UNTE
402	LOAD	Y	53	57	1.52	123	1.52	GLOR UNTE
403	LOAD	Z	53	57	1.52	21	1.52	GLOR UNTE
404	LOAD	Y	53	57	3.04	126	1.52	GLOR UNTE
405	LOAD	Z	53	57	3.04	21	1.52	GLOR UNTE
406	LOAD	Y	10	11	0.00	21	9.67	GLOR UNTE
407	LOAD	Z	10	11	9.67	21	9.67	GLOR UNTE
408	LOAD	Y	10	11	19.33	21	9.67	GLOR UNTE
409	LOAD	Z	11	12	0.00	21	9.67	GLOR UNTE
410	LOAD	Y	11	12	9.67	21	9.67	GLOR UNTE
411	LOAD	Z	11	12	19.33	21	9.67	GLOR UNTE
412	LOAD	Y	12	13	0.00	09	9.67	GLOR UNTE
413	LOAD	Z	12	13	0.00	05	9.67	GLOR UNTE
414	LOAD	Y	12	13	9.67	09	9.67	GLOR UNTE
415	LOAD	Z	12	13	9.67	05	9.67	GLOR UNTE
416	LOAD	Y	12	13	19.33	10	9.67	GLOR UNTE
417	LOAD	Z	12	13	19.33	06	9.67	GLOR UNTE
418	LOAD	Y	13	14	0.00	10	9.67	GLOR UNTE
419	LOAD	Z	13	14	0.00	06	9.67	GLOR UNTE
420	LOAD	Y	13	14	9.67	10	9.67	GLOR UNTE
421	LOAD	Z	13	14	9.67	06	9.67	GLOR UNTE
422	LOAD	Y	13	14	19.34	10	9.67	GLOR UNTE
423	LOAD	Z	13	14	19.34	06	9.67	GLOR UNTE
424	LOAD	Y	14	15	0.00	10	9.67	GLOR UNTE
425	LOAD	Z	14	15	0.00	06	9.67	GLOR UNTE
426	LOAD	Y	14	15	9.67	10	9.67	GLOR UNTE
427	LOAD	Z	14	15	9.67	06	9.67	GLOR UNTE
428	LOAD	Y	14	15	19.34	10	9.67	GLOR UNTE
429	LOAD	Z	14	15	19.34	06	9.67	GLOR UNTE
430	LOAD	Y	15	16	0.00	10	9.67	GLOR UNTE
431	LOAD	Z	15	16	0.00	06	9.67	GLOR UNTE
432	LOAD	Y	15	16	9.67	10	9.67	GLOR UNTE
433	LOAD	Z	15	16	9.67	06	9.67	GLOR UNTE
434	LOAD	Y	15	16	19.33	09	9.67	GLOR UNTE
435	LOAD	Z	15	16	19.33	05	9.67	GLOR UNTE
436	LOAD	Y	11	13	0.00	07	9.67	GLOR UNTE
437	LOAD	Z	11	13	0.00	04	9.67	GLOR UNTE
438	LOAD	Y	11	13	9.67	07	9.67	GLOR UNTE
439	LOAD	Z	11	13	9.67	04	9.67	GLOR UNTE
440	LOAD	Y	11	13	19.33	04	9.67	GLOR UNTE
441	LOAD	Z	11	13	19.33	04	9.67	GLOR UNTE
442	LOAD	Y	13	15	0.00	18	9.67	GLOR UNTE



SPALL 1-2

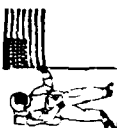
LINE NO. 1 2 3 4 5 6 7 8

443	LOAD Y	13	15	9.67	1A	9.67	1P	GLOR UNIT	AV 0 1
444	LOAD Y	13	15	19.33	1A	9.67	1A	GLOR UNIT	AV 0 1
445	LOAD X	15	11	0.00	0A	9.67	0A	GLOR UNIT	AV 0 1
446	LOAD Y	15	11	0.00	0A	9.67	0A	GLOR UNIT	AV 0 1
447	LOAD Y	15	11	9.67	0A	9.67	0A	GLOR UNIT	AV 0 1
448	LOAD Y	15	11	9.67	0A	9.67	0A	GLOR UNIT	AV 0 1
449	LOAD X	15	11	19.33	0A	9.67	0A	GLOR UNIT	AV 0 1
450	LOAD Y	15	11	19.33	0A	9.67	0A	GLOR UNIT	AV 0 1
451	LOAD Y	22	23	0.00	2A	8.13	2A	GLOR UNIT	AV 0 1
452	LOAD Y	22	23	8.13	2A	8.13	2A	GLOR UNIT	AV 0 1
453	LOAD Y	22	23	16.25	2A	8.13	2A	GLOR UNIT	AV 0 1
454	LOAD Y	23	24	0.00	2A	8.13	2A	GLOR UNIT	AV 0 1
455	LOAD Y	23	24	8.13	2A	8.13	2A	GLOR UNIT	AV 0 1
456	LOAD Y	23	24	16.25	2A	8.13	2A	GLOR UNIT	AV 0 1
457	LOAD X	24	25	0.00	1A	8.13	1A	GLOR UNIT	AV 0 1
458	LOAD Y	24	25	0.00	0A	8.13	0A	GLOR UNIT	AV 0 1
459	LOAD X	24	25	8.13	1A	8.13	1A	GLOR UNIT	AV 0 1
460	LOAD Y	24	25	8.13	0A	8.13	0A	GLOR UNIT	AV 0 1
461	LOAD Y	24	25	16.25	1A	8.13	1A	GLOR UNIT	AV 0 1
462	LOAD Y	24	25	16.25	0A	8.13	0A	GLOR UNIT	AV 0 1
463	LOAD X	25	26	0.00	1A	8.13	1A	GLOR UNIT	AV 0 1
464	LOAD Y	25	26	0.00	0A	8.13	0A	GLOR UNIT	AV 0 1
465	LOAD X	25	26	8.13	1A	8.13	1A	GLOR UNIT	AV 0 1
466	LOAD Y	25	26	8.13	0A	8.13	0A	GLOR UNIT	AV 0 1
467	LOAD X	25	26	16.25	1A	8.13	1A	GLOR UNIT	AV 0 1
468	LOAD Y	25	26	16.25	0A	8.13	0A	GLOR UNIT	AV 0 1
469	LOAD X	26	27	0.00	1A	8.13	1A	GLOR UNIT	AV 0 1
470	LOAD Y	26	27	0.00	0A	8.13	0A	GLOR UNIT	AV 0 1
471	LOAD X	26	27	8.13	1A	8.13	1A	GLOR UNIT	AV 0 1
472	LOAD Y	26	27	8.13	0A	8.13	0A	GLOR UNIT	AV 0 1
473	LOAD X	26	27	16.25	1A	8.13	1A	GLOR UNIT	AV 0 1
474	LOAD Y	26	27	16.25	0A	8.13	0A	GLOR UNIT	AV 0 1
475	LOAD X	27	22	0.00	1A	8.13	1A	GLOR UNIT	AV 0 1
476	LOAD Y	27	22	0.00	0A	8.13	0A	GLOR UNIT	AV 0 1
477	LOAD X	27	22	8.13	1A	8.13	1A	GLOR UNIT	AV 0 1
478	LOAD Y	27	22	8.13	0A	8.13	0A	GLOR UNIT	AV 0 1
479	LOAD X	27	22	16.25	1A	8.13	1A	GLOR UNIT	AV 0 1
480	LOAD Y	27	22	16.25	0A	8.13	0A	GLOR UNIT	AV 0 1
481	LOAD X	23	25	0.00	0A	8.13	0A	GLOR UNIT	AV 0 1
482	LOAD Y	23	25	0.00	0A	8.13	0A	GLOR UNIT	AV 0 1
483	LOAD X	23	25	8.13	0A	8.13	0A	GLOR UNIT	AV 0 1
484	LOAD Y	23	25	8.13	0A	8.13	0A	GLOR UNIT	AV 0 1
485	LOAD X	23	25	16.25	0A	8.13	0A	GLOR UNIT	AV 0 1
486	LOAD Y	23	25	16.25	0A	8.13	0A	GLOR UNIT	AV 0 1
487	LOAD Y	25	27	0.00	2A	8.13	2A	GLOR UNIT	AV 0 1
488	LOAD Y	25	27	8.13	2A	8.13	2A	GLOR UNIT	AV 0 1
489	LOAD Y	25	27	16.25	2A	8.13	2A	GLOR UNIT	AV 0 1
490	LOAD X	27	23	0.00	0A	8.13	0A	GLOR UNIT	AV 0 1
491	LOAD Y	27	23	0.00	0A	8.13	0A	GLOR UNIT	AV 0 1
492	LOAD X	27	23	8.13	0A	8.13	0A	GLOR UNIT	AV 0 1



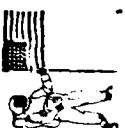
SFAL 00002

LINE NO.	1	2	3	4	5	6	7	8
493	LOAD	27	23	8.13	05	05	05	05
494	LOAD	27	23	8.13	05	05	05	05
495	LOAD	27	23	8.13	05	05	05	05
496	LOAD	34	35	6.59	23	23	23	23
497	LOAD	34	35	6.59	23	23	23	23
498	LOAD	34	35	6.59	23	23	23	23
499	LOAD	34	35	6.59	23	23	23	23
500	LOAD	34	35	6.59	23	23	23	23
501	LOAD	34	35	6.59	23	23	23	23
502	LOAD	34	35	6.59	23	23	23	23
503	LOAD	34	35	6.59	23	23	23	23
504	LOAD	34	35	6.59	23	23	23	23
505	LOAD	34	35	6.59	23	23	23	23
506	LOAD	34	35	6.59	23	23	23	23
507	LOAD	34	35	6.59	23	23	23	23
508	LOAD	34	35	6.59	23	23	23	23
509	LOAD	34	35	6.59	23	23	23	23
510	LOAD	34	35	6.59	23	23	23	23
511	LOAD	34	35	6.59	23	23	23	23
512	LOAD	34	35	6.59	23	23	23	23
513	LOAD	34	35	6.59	23	23	23	23
514	LOAD	34	35	6.59	23	23	23	23
515	LOAD	34	35	6.59	23	23	23	23
516	LOAD	34	35	6.59	23	23	23	23
517	LOAD	34	35	6.59	23	23	23	23
518	LOAD	34	35	6.59	23	23	23	23
519	LOAD	34	35	6.59	23	23	23	23
520	LOAD	34	35	6.59	23	23	23	23
521	LOAD	34	35	6.59	23	23	23	23
522	LOAD	34	35	6.59	23	23	23	23
523	LOAD	34	35	6.59	23	23	23	23
524	LOAD	34	35	6.59	23	23	23	23
525	LOAD	34	35	6.59	23	23	23	23
526	LOAD	34	35	6.59	23	23	23	23
527	LOAD	34	35	6.59	23	23	23	23
528	LOAD	34	35	6.59	23	23	23	23
529	LOAD	34	35	6.59	23	23	23	23
530	LOAD	34	35	6.59	23	23	23	23
531	LOAD	34	35	6.59	23	23	23	23
532	LOAD	34	35	6.59	23	23	23	23
533	LOAD	34	35	6.59	23	23	23	23
534	LOAD	34	35	6.59	23	23	23	23
535	LOAD	34	35	6.59	23	23	23	23
536	LOAD	34	35	6.59	23	23	23	23
537	LOAD	34	35	6.59	23	23	23	23
538	LOAD	34	35	6.59	23	23	23	23
539	LOAD	34	35	6.59	23	23	23	23
540	LOAD	34	35	6.59	23	23	23	23
541	LOAD	34	35	6.59	23	23	23	23
542	LOAD	34	35	6.59	23	23	23	23



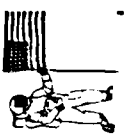
SEALION-2

LINE NO.	1	2	3	4	5	6	7	8
543	LOAD Y	40	50	10.10	46	5.05	46	GLOR UNTF
544	LOAD Y	50	51	0.00	46	5.05	46	GLOR UNTF
545	LOAD Y	50	51	5.05	46	5.05	46	GLOR UNTF
546	LOAD Y	50	51	10.10	46	5.05	46	GLOR UNTF
547	LOAD X	51	52	0.00	20	5.05	20	GLOR UNTF
548	LOAD Y	51	52	0.00	12	5.05	12	GLOR UNTF
549	LOAD X	51	52	5.05	21	5.05	21	GLOR UNTF
550	LOAD Y	51	52	5.05	12	5.05	12	GLOR UNTF
551	LOAD X	51	52	10.10	21	5.05	21	GLOR UNTF
552	LOAD Y	51	52	10.10	12	5.05	12	GLOR UNTF
553	LOAD X	52	53	0.00	21	5.05	21	GLOR UNTF
554	LOAD Y	52	53	0.00	12	5.05	12	GLOR UNTF
555	LOAD X	52	53	5.05	21	5.05	21	GLOR UNTF
556	LOAD Y	52	53	5.05	12	5.05	12	GLOR UNTF
557	LOAD X	52	53	10.10	21	5.05	21	GLOR UNTF
558	LOAD Y	52	53	10.10	12	5.05	12	GLOR UNTF
559	LOAD X	53	54	0.00	21	5.05	21	GLOR UNTF
560	LOAD Y	53	54	0.00	12	5.05	12	GLOR UNTF
561	LOAD X	53	54	5.05	21	5.05	21	GLOR UNTF
562	LOAD Y	53	54	5.05	12	5.05	12	GLOR UNTF
563	LOAD X	54	55	10.10	21	5.05	21	GLOR UNTF
564	LOAD Y	54	55	10.10	12	5.05	12	GLOR UNTF
565	LOAD X	54	55	0.00	21	5.05	21	GLOR UNTF
566	LOAD Y	54	55	0.00	12	5.05	12	GLOR UNTF
567	LOAD X	54	55	5.05	21	5.05	21	GLOR UNTF
568	LOAD Y	54	55	5.05	12	5.05	12	GLOR UNTF
569	LOAD X	54	55	10.10	20	5.05	20	GLOR UNTF
570	LOAD Y	54	55	10.10	12	5.05	12	GLOR UNTF
571	LOAD X	50	52	0.00	16	5.05	16	GLOR UNTF
572	LOAD Y	50	52	0.00	09	5.05	09	GLOR UNTF
573	LOAD X	50	52	5.05	16	5.05	16	GLOR UNTF
574	LOAD Y	50	52	5.05	09	5.05	09	GLOR UNTF
575	LOAD X	50	52	10.10	17	5.05	17	GLOR UNTF
576	LOAD Y	50	52	10.10	10	5.05	10	GLOR UNTF
577	LOAD X	52	54	0.00	39	5.05	39	GLOR UNTF
578	LOAD Y	52	54	5.05	39	5.05	39	GLOR UNTF
579	LOAD X	52	54	10.09	39	5.05	39	GLOR UNTF
580	LOAD Y	50	50	0.00	17	5.05	17	GLOR UNTF
581	LOAD X	54	50	0.00	10	5.05	10	GLOR UNTF
582	LOAD Y	54	50	5.05	17	5.05	17	GLOR UNTF
583	LOAD X	54	50	5.05	10	5.05	10	GLOR UNTF
584	LOAD Y	54	50	10.10	16	5.05	16	GLOR UNTF
585	LOAD X	54	50	10.10	09	5.05	09	GLOR UNTF
586	LOAD Y	11	22	0.00	1	13.44	1	GLOR UNTF
587	LOAD X	11	22	0.00	19	13.44	19	GLOR UNTF
588	LOAD Y	11	22	0.00	1	13.44	1	GLOR UNTF
589	LOAD X	11	22	13.44	1	13.44	1	GLOR UNTF
590	LOAD Y	11	22	13.44	19	13.44	19	GLOR UNTF
591	LOAD X	11	22	13.44	1	13.44	1	GLOR UNTF
592	LOAD Y	11	22	26.88	1	13.44	1	GLOR UNTF



SEAL HALL 2

LINE NO.	1	2	3	4	5	6	7	8
593	LOAD	Y	11	22	26.88	20	13.44	GLOR UNTE
594	LOAD	Z	11	22	26.88	1	13.44	GLOR UNTE
595	LOAD	X	11	24	0.00	1	13.44	GLOR UNTE
596	LOAD	Y	11	24	0.00	10	13.44	GLOR UNTE
597	LOAD	Z	11	24	0.00	1	13.44	GLOR UNTE
598	LOAD	X	11	24	13.44	1	13.44	GLOR UNTE
599	LOAD	Y	11	24	13.44	20	13.44	GLOR UNTE
600	LOAD	Z	11	24	13.44	1	13.44	GLOR UNTE
601	LOAD	X	11	24	26.88	1	13.44	GLOR UNTE
602	LOAD	Y	11	24	26.88	20	13.44	GLOR UNTE
603	LOAD	Z	11	24	26.88	1	13.44	GLOR UNTE
604	LOAD	X	11	24	0.00	03	13.44	GLOR UNTE
605	LOAD	Y	11	24	0.00	14	13.44	GLOR UNTE
606	LOAD	Z	11	24	0.00	09	13.44	GLOR UNTE
607	LOAD	X	11	24	13.44	03	13.44	GLOR UNTE
608	LOAD	Y	11	24	13.44	14	13.44	GLOR UNTE
609	LOAD	Z	11	24	13.44	09	13.44	GLOR UNTE
610	LOAD	X	11	24	26.88	03	13.44	GLOR UNTE
611	LOAD	Y	11	24	26.88	14	13.44	GLOR UNTE
612	LOAD	Z	11	24	26.88	09	13.44	GLOR UNTE
613	LOAD	X	11	24	0.00	04	13.44	GLOR UNTE
614	LOAD	Y	11	24	0.00	16	13.44	GLOR UNTE
615	LOAD	Z	11	24	0.00	08	13.44	GLOR UNTE
616	LOAD	X	11	24	13.44	04	13.44	GLOR UNTE
617	LOAD	Y	11	24	13.44	16	13.44	GLOR UNTE
618	LOAD	Z	11	24	13.44	08	13.44	GLOR UNTE
619	LOAD	X	11	24	26.88	04	13.44	GLOR UNTE
620	LOAD	Y	11	24	26.88	17	13.44	GLOR UNTE
621	LOAD	Z	11	24	26.88	08	13.44	GLOR UNTE
622	LOAD	X	11	24	0.00	04	13.44	GLOR UNTE
623	LOAD	Y	11	24	0.00	16	13.44	GLOR UNTE
624	LOAD	Z	11	24	0.00	08	13.44	GLOR UNTE
625	LOAD	X	11	24	13.44	04	13.44	GLOR UNTE
626	LOAD	Y	11	24	13.44	16	13.44	GLOR UNTE
627	LOAD	Z	11	24	13.44	08	13.44	GLOR UNTE
628	LOAD	X	11	24	26.88	04	13.44	GLOR UNTE
629	LOAD	Y	11	24	26.88	17	13.44	GLOR UNTE
630	LOAD	Z	11	24	26.88	08	13.44	GLOR UNTE
631	LOAD	X	11	24	0.00	03	13.44	GLOR UNTE
632	LOAD	Y	11	24	0.00	14	13.44	GLOR UNTE
633	LOAD	Z	11	24	0.00	09	13.44	GLOR UNTE
634	LOAD	X	11	24	13.44	03	13.44	GLOR UNTE
635	LOAD	Y	11	24	13.44	14	13.44	GLOR UNTE
636	LOAD	Z	11	24	13.44	09	13.44	GLOR UNTE
637	LOAD	X	11	24	26.88	03	13.44	GLOR UNTE
638	LOAD	Y	11	24	26.88	14	13.44	GLOR UNTE
639	LOAD	Z	11	24	26.88	09	13.44	GLOR UNTE
640	LOAD	X	11	24	0.00	1	13.44	GLOR UNTE
641	LOAD	Y	11	24	0.00	27	13.44	GLOR UNTE
642	LOAD	Z	11	24	0.00	1	13.44	GLOR UNTE



LINE NO.	1	2	3	4	5	6	7	8
643	LOAD X	22	34	18.20	1	18.20	1	GLOR UNTF
644	LOAD Y	22	34	18.20	29	18.20	32	GLOR UNTF
645	LOAD Z	22	34	18.20	1	18.20	1	GLOR UNTF
646	LOAD X	22	34	36.39	1	18.20	1	GLOR UNTF
647	LOAD Y	22	34	36.39	32	18.20	34	GLOR UNTF
648	LOAD Z	22	34	36.39	1	18.20	1	GLOR UNTF
649	LOAD X	24	34	0.00	04	20.96	04	GLOR UNTF
650	LOAD Y	24	34	0.00	11	20.96	13	GLOR UNTF
651	LOAD Z	24	34	0.00	10	20.96	12	GLOR UNTF
652	LOAD X	24	38	20.96	09	20.96	10	GLOR UNTF
653	LOAD Y	24	38	20.96	13	20.96	14	GLOR UNTF
654	LOAD Z	24	34	20.96	12	20.96	13	GLOR UNTF
655	LOAD X	24	34	41.93	10	20.96	11	GLOR UNTF
656	LOAD Y	24	34	41.93	14	20.96	15	GLOR UNTF
657	LOAD Z	24	34	41.93	13	20.96	14	GLOR UNTF
658	LOAD X	26	34	0.00	08	18.20	08	GLOR UNTF
659	LOAD Y	26	34	0.00	14	18.20	15	GLOR UNTF
660	LOAD Z	26	34	0.00	12	18.20	13	GLOR UNTF
661	LOAD X	26	34	18.20	08	18.20	09	GLOR UNTF
662	LOAD Y	26	34	18.20	15	18.20	16	GLOR UNTF
663	LOAD Z	26	34	18.20	13	18.20	14	GLOR UNTF
664	LOAD X	26	34	36.39	09	18.20	09	GLOR UNTF
665	LOAD Y	26	34	36.39	16	18.20	17	GLOR UNTF
666	LOAD Z	26	34	36.39	14	18.20	15	GLOR UNTF
667	LOAD X	34	49	0.00	1	11.86	02	GLOR UNTF
668	LOAD Y	34	49	0.00	36	11.86	40	GLOR UNTF
669	LOAD Z	34	49	0.00	1	11.86	1	GLOR UNTF
670	LOAD X	34	49	11.86	02	11.86	02	GLOR UNTF
671	LOAD Y	34	49	11.86	40	11.86	40	GLOR UNTF
672	LOAD Z	34	49	11.86	1	11.86	02	GLOR UNTF
673	LOAD X	34	49	23.72	02	11.86	02	GLOR UNTF
674	LOAD Y	34	49	23.72	40	11.86	50	GLOR UNTF
675	LOAD Z	34	49	23.72	02	11.86	02	GLOR UNTF
676	LOAD X	34	49	35.58	02	11.86	02	GLOR UNTF
677	LOAD Y	34	49	35.58	50	11.86	50	GLOR UNTF
678	LOAD Z	34	49	35.58	02	11.86	02	GLOR UNTF
679	LOAD X	34	51	0.00	04	13.93	04	GLOR UNTF
680	LOAD Y	34	51	0.00	15	13.93	17	GLOR UNTF
681	LOAD Z	34	51	0.00	16	13.93	18	GLOR UNTF
682	LOAD X	34	51	13.93	09	13.93	10	GLOR UNTF
683	LOAD Y	34	51	13.93	17	13.93	19	GLOR UNTF
684	LOAD Z	34	51	13.93	18	13.93	21	GLOR UNTF
685	LOAD X	34	51	27.86	10	13.93	11	GLOR UNTF
686	LOAD Y	34	51	27.86	19	13.93	21	GLOR UNTF
687	LOAD Z	34	51	27.86	21	13.93	23	GLOR UNTF
688	LOAD X	34	51	41.79	11	13.93	12	GLOR UNTF
689	LOAD Y	34	51	41.79	21	13.93	23	GLOR UNTF
690	LOAD Z	34	51	41.79	23	13.93	26	GLOR UNTF
691	LOAD X	34	53	0.00	04	9.44	10	GLOR UNTF
692	LOAD Y	34	53	0.00	23	9.44	25	GLOR UNTF



SFALOAD=2

LINE NO.	1	2	3	4	5	6	7	8
693	LOAD	2	34	53	0.00	15	9.49	GLOR UNTE
694	LOAD	3	34	53	0.49	10	9.49	GLOR UNTE
695	LOAD	4	34	53	0.49	25	9.49	GLOR UNTE
696	LOAD	5	34	53	0.49	10	9.49	GLOR UNTE
697	LOAD	6	34	53	18.97	11	9.49	GLOR UNTE
698	LOAD	7	34	53	18.97	28	9.49	GLOR UNTE
699	LOAD	8	34	53	18.97	14	9.49	GLOR UNTE
700	LOAD	9	34	53	28.46	31	9.49	GLOR UNTE
701	LOAD	10	34	53	28.46	13	9.49	GLOR UNTE
702	LOAD	11	34	53	28.46	20	9.49	GLOR UNTE
703	LOAD	12	34	53	37.95	14	9.49	GLOR UNTE
704	LOAD	13	34	53	37.95	34	9.49	GLOR UNTE
705	LOAD	14	34	53	37.95	22	9.49	GLOR UNTE
706	LOAD	15	55	58	0.00	113	5.70	GLOR UNTE
707	LOAD	16	55	58	5.70	126	5.70	GLOR UNTE
708	LOAD	17	55	58	11.40	141	5.70	GLOR UNTE
709	LOAD	18	55	58	17.10	158	5.70	GLOR UNTE
710	LOAD	19	55	58	22.80	178	5.70	GLOR UNTE
711	LOAD	20	58	61	0.00	202	4.19	GLOR UNTE
712	LOAD	21	58	61	4.19	221	4.19	GLOR UNTE
713	LOAD	22	58	61	8.39	240	4.19	GLOR UNTE
714	LOAD	23	58	59	0.00	113	5.70	GLOR UNTE
715	LOAD	24	58	59	5.70	126	5.70	GLOR UNTE
716	LOAD	25	58	59	11.40	141	5.70	GLOR UNTE
717	LOAD	26	58	59	17.10	158	5.70	GLOR UNTE
718	LOAD	27	58	59	22.80	178	5.70	GLOR UNTE
719	LOAD	28	59	64	0.00	202	4.19	GLOR UNTE
720	LOAD	29	59	64	4.19	221	4.19	GLOR UNTE
721	LOAD	30	59	60	8.39	240	4.19	GLOR UNTE
722	LOAD	31	57	60	0.00	114	5.70	GLOR UNTE
723	LOAD	32	57	60	5.70	129	5.70	GLOR UNTE
724	LOAD	33	57	60	11.40	143	5.70	GLOR UNTE
725	LOAD	34	57	60	17.10	160	5.70	GLOR UNTE
726	LOAD	35	57	60	22.80	180	5.70	GLOR UNTE
727	LOAD	36	60	70	0.00	201	2.00	GLOR UNTE
728	LOAD	37	60	70	2.00	210	2.00	GLOR UNTE
729	LOAD	38	60	70	4.00	220	2.00	GLOR UNTE
730	LOAD	39	70	67	0.00	231	.22	GLOR UNTE
731	LOAD	40	70	67	.22	242	.22	GLOR UNTE
732	LOAD	41	70	67	.44	253	.22	GLOR UNTE
733	LOAD	42	70	67	.67	264	.22	GLOR UNTE
734	LOAD	43	70	67	.89	275	.22	GLOR UNTE
735	LOAD	44	70	67	1.11	286	.22	GLOR UNTE
736	LOAD	45	70	67	1.33	299	.22	GLOR UNTE
737	LOAD	46	70	67	1.56	311	.22	GLOR UNTE
738	LOAD	47	70	67	1.78	324	.22	GLOR UNTE
739	LOAD	48	58	59	0.00	71	9.67	GLOR UNTE
740	LOAD	49	58	59	9.67	71	9.67	GLOR UNTE
741	LOAD	50	58	59	19.33	71	9.67	GLOR UNTE
742	LOAD	51	59	60	0.00	31	9.67	GLOR UNTE



SFALHAP-2

LINE NO.	1	2	3	4	5	6	7	8
743	LOAD Y	59	60	0.00	18	9.67	18	GLOR UNTE
744	LOAD X	59	60	9.67	32	9.67	32	GLOR UNTE
745	LOAD Y	59	60	9.67	18	9.67	18	GLOR UNTE
746	LOAD X	59	60	19.33	32	9.67	31	GLOR UNTE
747	LOAD Y	59	60	19.33	18	9.67	18	GLOR UNTE
748	LOAD X	60	58	0.00	31	9.67	32	GLOR UNTE
749	LOAD Y	60	58	0.00	18	9.67	18	GLOR UNTE
750	LOAD X	60	58	9.67	32	9.67	32	GLOR UNTE
751	LOAD Y	60	58	9.67	18	9.67	18	GLOR UNTE
752	LOAD X	60	58	19.33	32	9.67	31	GLOR UNTE
753	LOAD Y	60	58	19.33	18	9.67	18	GLOR UNTE
754	LOAD X	59	61	0.00	71	9.13	78	GLOR UNTE
755	LOAD Y	59	61	9.13	78	9.13	86	GLOR UNTE
756	LOAD X	59	61	18.25	86	9.13	95	GLOR UNTE
757	LOAD Y	60	64	0.00	24	8.41	27	GLOR UNTE
758	LOAD X	60	64	0.00	29	8.41	33	GLOR UNTE
759	LOAD Y	60	64	0.00	25	8.41	20	GLOR UNTE
760	LOAD X	60	64	8.41	27	8.41	30	GLOR UNTE
761	LOAD Y	60	64	8.41	33	8.41	36	GLOR UNTE
762	LOAD Z	60	64	16.81	28	8.41	31	GLOR UNTE
763	LOAD X	60	64	16.81	30	8.41	33	GLOR UNTE
764	LOAD Y	60	64	16.81	36	8.41	39	GLOR UNTE
765	LOAD Z	60	64	16.81	31	8.41	34	GLOR UNTE
766	LOAD X	58	67	0.00	24	7.07	27	GLOR UNTE
767	LOAD Y	58	67	0.00	29	7.07	32	GLOR UNTE
768	LOAD Z	58	67	0.00	25	7.07	28	GLOR UNTE
769	LOAD X	58	67	7.07	27	7.07	29	GLOR UNTE
770	LOAD Y	58	67	7.07	32	7.07	35	GLOR UNTE
771	LOAD Z	58	67	7.07	28	7.07	30	GLOR UNTE
772	LOAD X	58	67	14.14	29	7.07	31	GLOR UNTE
773	LOAD Y	58	67	14.14	35	7.07	37	GLOR UNTE
774	LOAD Z	58	67	14.14	30	7.07	32	GLOR UNTE
775	LOAD X	70	66	0.00	42	.33	43	GLOR UNTE
776	LOAD Y	70	66	.33	43	.33	43	GLOR UNTE
777	LOAD Z	70	66	.66	43	.33	43	GLOR UNTE
778	LOAD X	70	66	1.00	43	.33	43	GLOR UNTE
779	LOAD Y	70	66	1.33	43	.33	43	GLOR UNTE
780	LOAD Z	70	66	1.66	43	.33	44	GLOR UNTE
781	LOAD X	70	66	1.99	44	.33	44	GLOR UNTE
782	LOAD Y	70	66	2.33	44	.33	44	GLOR UNTE
783	LOAD Z	70	66	2.66	44	.33	43	GLOR UNTE
784	LOAD X	70	68	0.00	42	.33	43	GLOR UNTE
785	LOAD Y	70	68	.33	43	.33	43	GLOR UNTE
786	LOAD Z	70	68	.66	43	.33	43	GLOR UNTE
787	LOAD X	70	68	1.00	43	.33	43	GLOR UNTE
788	LOAD Y	70	68	1.33	43	.33	43	GLOR UNTE
789	LOAD Z	70	68	1.66	43	.33	44	GLOR UNTE
790	LOAD X	70	68	1.99	44	.33	44	GLOR UNTE
791	LOAD Y	70	68	2.33	44	.33	44	GLOR UNTE
792	LOAD Z	70	68	2.66	44	.33	43	GLOR UNTE



SEAL 11-11-62

LINE NO.	1	2	3	4	5	6	7	8
1	5	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0
33	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0
35	0	0	0	0	0	0	0	0
36	0	0	0	0	0	0	0	0
37	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0
39	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0
41	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0
43	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0
47	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0
51	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0
53	0	0	0	0	0	0	0	0
54	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0
56	0	0	0	0	0	0	0	0
57	0	0	0	0	0			

793	LOAD	2	43	55	4.08=	345	4.08 244104	GLOR CONC	WN 1 2
794	LOAD Y	43	55					GLOR MONT	WN 1 2
795	LOAD X	43	55					GLOR CONC	WN 1 2
796	LOAD Y	44	56					GLOR MONT	WN 1 2
797	LOAD X	44	56					GLOR CONC	WN 1 2
798	LOAD Y	45	57					GLOR MONT	WN 1 2
799	LOAD X	45	57					GLOR CONC	WN 1 2
800	LOAD Y	45	55		4.08=	1111	4.07 244104	GLOR MONT	WN 1 2
801	LOAD X	43	55					GLOR CONC	WN 2 2
802	LOAD Y	44	56		4.08=	1111	4.08 653247	GLOR MONT	WN 2 2
803	LOAD X	44	56					GLOR CONC	WN 2 2
804	LOAD Y	45	57		4.07=	1111	4.08 653247	GLOR MONT	WN 2 2
805	LOAD X	45	57					GLOR CONC	WN 2 2
806	LOAD X	10	22		0.00=	1	4.07 653247	GLOR MONT	WN 2 2
807	LOAD Y	10	22		0.00=	51		GLOR UNTF	WN 0 2
808	LOAD Z	10	22		0.00	64		GLOR UNTF	WN 0 2
809	LOAD X	10	22		10.81=	1		GLOR UNTF	WN 0 2
810	LOAD Y	10	22		10.81=	52		GLOR UNTF	WN 0 2
811	LOAD Z	10	22		10.81	64		GLOR UNTF	WN 0 2
812	LOAD X	10	22		21.63=	1		GLOR UNTF	WN 0 2
813	LOAD Y	10	22		21.63=	54		GLOR UNTF	WN 0 2
814	LOAD Z	10	22		21.63	64		GLOR UNTF	WN 0 2
815	LOAD X	22	34		0.00=	1		GLOR UNTF	WN 0 2
816	LOAD Y	22	34		0.00=	57		GLOR UNTF	WN 0 2
817	LOAD Z	22	34		0.00	65		GLOR UNTF	WN 0 2
818	LOAD X	22	34		10.81=	1		GLOR UNTF	WN 0 2
819	LOAD Y	22	34		10.81=	62		GLOR UNTF	WN 0 2
820	LOAD Z	22	34		10.81	65		GLOR UNTF	WN 0 2
821	LOAD X	22	34		21.63=	1		GLOR UNTF	WN 0 2
822	LOAD Y	22	34		21.63=	68		GLOR UNTF	WN 0 2
823	LOAD Z	22	34		21.63	65		GLOR UNTF	WN 0 2
824	LOAD X	34	40		0.00=	1		GLOR UNTF	WN 0 2
825	LOAD Y	34	40		0.00=	78		GLOR UNTF	WN 0 2
826	LOAD Z	34	40		0.00	66		GLOR UNTF	WN 0 2
827	LOAD X	34	40		4.73=	1		GLOR UNTF	WN 0 2
828	LOAD Y	34	40		4.73=	82		GLOR UNTF	WN 0 2
829	LOAD Z	34	40		4.73	66		GLOR UNTF	WN 0 2
830	LOAD X	34	40		9.45=	1		GLOR UNTF	WN 0 2
831	LOAD Y	34	40		9.45=	87		GLOR UNTF	WN 0 2
832	LOAD Z	34	40		9.45	66		GLOR UNTF	WN 0 2
833	LOAD X	40	49		0.00=	1		GLOR UNTF	WN 0 2
834	LOAD Y	40	49		0.00=	92		GLOR UNTF	WN 0 2
835	LOAD Z	40	49		0.00	68		GLOR UNTF	WN 0 2
836	LOAD X	40	49		6.09=	1		GLOR UNTF	WN 0 2
837	LOAD Y	40	49		6.09=	101		GLOR UNTF	WN 0 2
838	LOAD Z	40	49		6.09	69		GLOR UNTF	WN 0 2
839	LOAD X	40	49		12.17=	1		GLOR UNTF	WN 0 2
840	LOAD Y	40	49		12.17=	111		GLOR UNTF	WN 0 2
841	LOAD Z	40	49		12.17	10		GLOR UNTF	WN 0 2
842	LOAD X	49	55		0.00=	1		GLOR UNTF	WN 0 2



LINE NO.	1	2	3	4	5	6	7	8
A43	LOAD	Y	49	55	0.00	123	1.52	124
A44	LOAD	Z	49	55	0.00	10	1.52	10
A45	LOAD	X	49	55	1.52	1	1.52	1
A46	LOAD	Y	49	55	1.52	126	1.52	129
A47	LOAD	Z	49	55	1.52	10	1.52	11
A48	LOAD	X	49	55	3.04	1	1.52	02
A49	LOAD	Y	49	55	3.04	129	1.52	133
B50	LOAD	Z	49	55	3.04	11	1.52	11
B51	LOAD	X	12	24	0.00	1	10.81	1
B52	LOAD	Y	12	24	0.00	51	10.81	52
B53	LOAD	Z	12	24	0.00	04	10.81	04
B54	LOAD	X	12	24	10.81	1	10.81	1
B55	LOAD	Y	12	24	10.81	52	10.81	54
B56	LOAD	Z	12	24	10.81	04	10.81	04
B57	LOAD	X	12	24	21.63	1	10.81	1
B58	LOAD	Y	12	24	21.63	54	10.81	57
B59	LOAD	Z	12	24	21.63	04	10.81	05
B60	LOAD	X	24	36	0.00	1	10.81	1
B61	LOAD	Y	24	36	0.00	57	10.81	62
B62	LOAD	Z	24	36	0.00	05	10.81	05
B63	LOAD	X	24	36	10.81	1	10.81	1
B64	LOAD	Y	24	36	10.81	62	10.81	64
B65	LOAD	Z	24	36	10.81	05	10.81	05
B66	LOAD	X	24	36	21.63	1	10.81	1
B67	LOAD	Y	24	36	21.63	64	10.81	74
B68	LOAD	Z	24	36	21.63	05	10.81	06
B69	LOAD	X	36	48	0.00	1	4.73	1
B70	LOAD	Y	36	48	0.00	74	4.73	82
B71	LOAD	Z	36	48	0.00	05	4.73	04
B72	LOAD	X	36	48	4.73	1	4.73	1
B73	LOAD	Y	36	48	4.73	82	4.73	87
B74	LOAD	Z	36	48	4.73	04	4.73	04
B75	LOAD	X	36	48	9.45	1	4.73	1
B76	LOAD	Y	36	48	9.45	87	4.73	93
B77	LOAD	Z	36	48	9.45	04	4.73	04
B78	LOAD	X	48	51	0.00	1	6.09	1
B79	LOAD	Y	48	51	0.00	92	6.09	101
B80	LOAD	Z	48	51	0.00	08	6.09	09
B81	LOAD	X	48	51	6.09	1	6.09	1
B82	LOAD	Y	48	51	6.09	101	6.09	111
B83	LOAD	Z	48	51	6.09	09	6.09	10
B84	LOAD	X	48	51	12.17	1	6.09	02
B85	LOAD	Y	48	51	12.17	111	6.09	123
B86	LOAD	Z	48	51	12.17	10	6.09	11
B87	LOAD	X	51	56	0.00	1	1.52	1
B88	LOAD	Y	51	56	0.00	123	1.52	126
B89	LOAD	Z	51	56	0.00	10	1.52	10
B90	LOAD	X	51	56	1.52	1	1.52	1
B91	LOAD	Y	51	56	1.52	126	1.52	129
B92	LOAD	Z	51	56	1.52	10	1.52	11



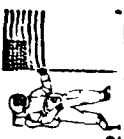
SFAT 1111-2

LINE NO.	1	2	3	4	5	6	7	8
803	LOAD	Y	51	54	3.04	1	1.52	02
804	LOAD	Y	51	56	3.04	129	1.52	133
805	LOAD	Z	51	54	3.04	11	1.52	11
806	LOAD	Y	14	26	0.00	39	10.81	41
807	LOAD	Z	14	26	0.00	07	10.81	07
808	LOAD	Y	14	24	10.81	41	10.81	42
809	LOAD	Z	14	24	10.81	07	10.81	07
810	LOAD	Y	14	24	21.63	42	10.81	44
811	LOAD	Z	14	24	21.63	07	10.81	04
812	LOAD	Y	24	34	0.00	45	10.86	47
813	LOAD	Z	24	34	0.00	09	10.86	09
814	LOAD	Y	24	34	10.86	47	10.86	51
815	LOAD	Z	24	34	10.86	09	10.86	10
816	LOAD	Y	26	34	21.72	51	10.86	55
817	LOAD	Z	26	34	21.72	10	10.86	10
818	LOAD	Y	34	42	0.00	51	5.01	55
819	LOAD	Z	34	42	0.00	20	5.01	21
820	LOAD	Y	34	42	5.01	55	5.01	50
821	LOAD	Z	34	42	5.01	21	5.01	23
822	LOAD	Y	34	42	10.02	59	5.01	60
823	LOAD	Z	34	42	10.02	23	5.01	25
824	LOAD	Y	42	53	0.00	53	5.31	54
825	LOAD	Z	42	53	0.00	33	5.31	36
826	LOAD	Y	42	53	5.31	54	5.31	60
827	LOAD	Z	42	53	5.31	36	5.31	40
828	LOAD	Y	42	53	10.63	64	5.31	70
829	LOAD	Z	42	53	10.63	40	5.31	44
830	LOAD	Y	42	53	15.94	70	5.31	74
831	LOAD	Z	42	53	15.94	44	5.31	49
832	LOAD	Y	53	57	0.00	106	1.52	109
833	LOAD	Z	53	57	0.00	14	1.52	14
834	LOAD	Y	53	57	1.52	109	1.52	113
835	LOAD	Z	53	57	1.52	18	1.52	19
836	LOAD	Y	53	57	3.04	113	1.52	114
837	LOAD	Z	53	57	3.04	19	1.52	19
838	LOAD	Y	10	11	0.00	23	9.67	23
839	LOAD	Z	10	11	0.00	23	9.67	23
840	LOAD	Y	10	11	9.67	23	9.67	23
841	LOAD	Z	10	11	9.67	23	9.67	23
842	LOAD	Y	11	12	0.00	23	9.67	23
843	LOAD	Z	11	12	0.00	23	9.67	23
844	LOAD	Y	11	12	9.67	23	9.67	23
845	LOAD	Z	11	12	9.67	23	9.67	23
846	LOAD	Y	12	13	0.00	10	9.67	10
847	LOAD	Z	12	13	0.00	06	9.67	06
848	LOAD	Y	12	13	9.67	10	9.67	10
849	LOAD	Z	12	13	9.67	06	9.67	06
850	LOAD	Y	12	13	19.33	06	9.67	06
851	LOAD	Z	12	13	19.33	10	9.67	09
852	LOAD	Y	13	14	0.00	09	9.67	09
853	LOAD	Z	13	14	0.00	05	9.67	05
854	LOAD	Y	13	14	9.67	09	9.67	09
855	LOAD	Z	13	14	9.67	05	9.67	05



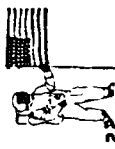
SFAL000-2

LINE NO.	1	2	3	4	5	6	7	8
903	LOAD	Y	13	14	0.67	05	9.67	05
904	LOAD	X	13	14	19.34	0A	9.67	0A
905	LOAD	Y	13	14	19.34	05	9.67	05
906	LOAD	X	14	15	0.00	0A	9.67	0A
907	LOAD	Y	14	15	0.00	05	9.67	05
908	LOAD	X	14	15	9.67	0A	9.67	0A
909	LOAD	Y	14	15	9.67	05	9.67	05
950	LOAD	X	14	15	19.34	09	9.67	09
951	LOAD	Y	14	15	19.34	05	9.67	05
952	LOAD	X	15	16	0.00	09	9.67	10
953	LOAD	Y	15	16	0.00	05	9.67	0A
954	LOAD	X	15	16	9.67	10	9.67	10
955	LOAD	Y	15	16	9.67	0A	9.67	0A
956	LOAD	X	15	16	19.33	10	9.67	10
957	LOAD	Y	15	16	19.33	0A	9.67	0A
958	LOAD	X	11	13	0.00	0A	9.67	0A
959	LOAD	Y	11	13	0.00	0A	9.67	0A
960	LOAD	X	11	13	9.67	0A	9.67	0A
961	LOAD	Y	11	13	9.67	0A	9.67	0A
962	LOAD	X	11	13	19.33	07	9.67	07
963	LOAD	Y	11	13	19.33	0A	9.67	0A
964	LOAD	X	13	15	0.00	17	9.67	17
965	LOAD	Y	13	15	9.67	17	9.67	17
966	LOAD	X	13	15	19.33	17	9.67	17
967	LOAD	Y	13	15	0.00	07	9.67	07
968	LOAD	X	15	17	0.00	0A	9.67	0A
969	LOAD	Y	15	17	9.67	0A	9.67	0A
970	LOAD	X	15	17	9.67	0A	9.67	0A
971	LOAD	Y	15	17	19.33	0A	9.67	0A
972	LOAD	X	15	17	19.33	0A	9.67	0A
973	LOAD	Y	22	23	0.00	26	8.13	26
974	LOAD	X	22	23	8.13	26	8.13	26
975	LOAD	Y	22	23	14.25	26	8.13	26
976	LOAD	X	23	24	0.00	26	8.13	26
977	LOAD	Y	23	24	8.13	26	8.13	26
978	LOAD	X	23	24	14.25	26	8.13	26
979	LOAD	Y	24	25	0.00	11	8.13	11
980	LOAD	X	24	25	0.00	06	8.13	06
981	LOAD	Y	24	25	8.13	11	8.13	11
982	LOAD	X	24	25	8.13	06	8.13	06
983	LOAD	Y	24	25	14.25	11	8.13	11
984	LOAD	X	24	25	14.25	06	8.13	06
985	LOAD	Y	25	26	0.00	06	8.13	06
986	LOAD	X	25	26	0.00	10	8.13	10
987	LOAD	Y	25	26	8.13	10	8.13	10
988	LOAD	X	25	26	8.13	06	8.13	06
989	LOAD	Y	25	26	14.25	10	8.13	10
990	LOAD	X	25	26	14.25	06	8.13	06
991	LOAD	Y	26	27	0.00	05	8.13	05
992	LOAD	X	26	27	0.00	05	8.13	05



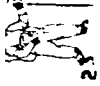
SPALHAD=2

LINE NO.	1	2	3	4	5	6	7	8
993	LOAN X	24	27	A.13=	10	A.13=	10	GLOR UNIT
994	LOAN Y	24	27	A.13=	06	A.13=	06	GLOR UNIT
995	LOAN X	24	27	16.25=	10	A.13=	11	GLOR UNIT
996	LOAN Y	24	27	16.25=	06	A.13=	06	GLOR UNIT
997	LOAN X	27	22	0.00=	11	A.13=	11	GLOR UNIT
998	LOAN Y	27	22	0.00=	06	A.13=	06	GLOR UNIT
999	LOAN X	27	22	A.13=	11	A.13=	11	GLOR UNIT
1000	LOAN Y	27	22	A.13=	06	A.13=	06	GLOR UNIT
1001	LOAN X	27	22	16.25=	11	A.13=	11	GLOR UNIT
1002	LOAN Y	27	22	16.25=	06	A.13=	06	GLOR UNIT
1003	LOAN X	23	25	0.00=	09	A.13=	09	GLOR UNIT
1004	LOAN Y	23	25	0.00=	05	A.13=	05	GLOR UNIT
1005	LOAN X	23	25	A.13=	09	A.13=	09	GLOR UNIT
1006	LOAN Y	23	25	A.13=	05	A.13=	05	GLOR UNIT
1007	LOAN X	23	25	16.25=	09	A.13=	09	GLOR UNIT
1008	LOAN Y	23	25	16.25=	05	A.13=	05	GLOR UNIT
1009	LOAN X	25	27	A.13=	19	A.13=	19	GLOR UNIT
1010	LOAN Y	25	27	A.13=	19	A.13=	19	GLOR UNIT
1011	LOAN X	25	27	16.25=	19	A.13=	19	GLOR UNIT
1012	LOAN Y	27	23	0.00=	08	A.13=	08	GLOR UNIT
1013	LOAN X	27	23	0.00=	05	A.13=	05	GLOR UNIT
1014	LOAN Y	27	23	A.13=	08	A.13=	09	GLOR UNIT
1015	LOAN X	27	23	A.13=	05	A.13=	05	GLOR UNIT
1016	LOAN Y	27	23	16.25=	09	A.13=	09	GLOR UNIT
1017	LOAN X	27	23	16.25=	05	A.13=	05	GLOR UNIT
1018	LOAN Y	34	35	0.00=	24	A.59=	24	GLOR UNIT
1019	LOAN X	34	35	6.59=	24	A.59=	24	GLOR UNIT
1020	LOAN Y	34	35	13.18=	24	6.59=	24	GLOR UNIT
1021	LOAN X	35	36	0.00=	24	6.59=	24	GLOR UNIT
1022	LOAN Y	35	36	A.59=	24	A.59=	24	GLOR UNIT
1023	LOAN X	35	36	13.18=	24	6.59=	24	GLOR UNIT
1024	LOAN Y	36	37	0.00=	10	6.59=	10	GLOR UNIT
1025	LOAN X	36	37	0.00=	06	6.59=	06	GLOR UNIT
1026	LOAN Y	36	37	6.59=	10	A.59=	10	GLOR UNIT
1027	LOAN X	36	37	6.59=	06	6.59=	06	GLOR UNIT
1028	LOAN Y	36	37	13.18=	10	A.59=	10	GLOR UNIT
1029	LOAN X	36	37	13.18=	06	6.59=	06	GLOR UNIT
1030	LOAN Y	37	38	0.00=	07	10.07=	07	GLOR UNIT
1031	LOAN X	37	38	0.00=	02	10.07=	02	GLOR UNIT
1032	LOAN Y	37	38	10.07=	07	10.07=	06	GLOR UNIT
1033	LOAN X	37	38	10.07=	02	10.07=	02	GLOR UNIT
1034	LOAN Y	37	38	20.15=	06	10.07=	06	GLOR UNIT
1035	LOAN X	37	38	20.15=	02	10.07=	02	GLOR UNIT
1036	LOAN Y	38	39	0.00=	06	10.07=	06	GLOR UNIT
1037	LOAN X	38	39	0.00=	02	10.07=	02	GLOR UNIT
1038	LOAN Y	38	39	10.07=	06	10.07=	07	GLOR UNIT
1039	LOAN X	38	39	10.07=	02	10.07=	02	GLOR UNIT
1040	LOAN Y	38	39	20.15=	07	10.07=	07	GLOR UNIT
1041	LOAN X	38	39	20.15=	02	10.07=	02	GLOR UNIT
1042	LOAN Y	39	34	0.00=	10	6.59=	10	GLOR UNIT



SPAL 1111-2

LINE NO.	1	2	3	4	5	6	7	8
1041	LOAD Y	39	34	0.00	0.6	6.59	GLOR UNTF	WV 0 2
1042	LOAD X	39	34	6.59	10	6.59	GLOR UNTF	WV 0 2
1043	LOAD Y	39	34	6.59	06	6.59	GLOR UNTF	WV 0 2
1044	LOAD X	39	34	13.18	10	6.59	GLOR UNTF	WV 0 2
1045	LOAD Y	39	34	13.18	06	6.59	GLOR UNTF	WV 0 2
1046	LOAD X	35	37	0.00	10	6.59	GLOR UNTF	WV 0 2
1047	LOAD Y	35	37	0.00	06	6.59	GLOR UNTF	WV 0 2
1048	LOAD X	35	37	6.59	10	6.59	GLOR UNTF	WV 0 2
1049	LOAD Y	35	37	6.59	06	6.59	GLOR UNTF	WV 0 2
1050	LOAD X	35	37	13.18	10	6.59	GLOR UNTF	WV 0 2
1051	LOAD Y	35	37	13.18	06	6.59	GLOR UNTF	WV 0 2
1052	LOAD X	35	37	0.00	10	6.59	GLOR UNTF	WV 0 2
1053	LOAD Y	35	37	0.00	06	6.59	GLOR UNTF	WV 0 2
1054	LOAD X	37	39	6.59	23	6.59	GLOR UNTF	WV 0 2
1055	LOAD Y	37	39	6.59	23	6.59	GLOR UNTF	WV 0 2
1056	LOAD X	37	39	13.17	23	6.59	GLOR UNTF	WV 0 2
1057	LOAD Y	39	35	0.00	10	6.59	GLOR UNTF	WV 0 2
1058	LOAD X	39	35	0.00	06	6.59	GLOR UNTF	WV 0 2
1059	LOAD Y	39	35	6.59	10	6.59	GLOR UNTF	WV 0 2
1060	LOAD X	39	35	13.18	10	6.59	GLOR UNTF	WV 0 2
1061	LOAD Y	39	35	13.18	06	6.59	GLOR UNTF	WV 0 2
1062	LOAD X	49	50	0.00	06	6.59	GLOR UNTF	WV 0 2
1063	LOAD Y	49	50	0.00	48	5.05	GLOR UNTF	WV 0 2
1064	LOAD X	49	50	5.05	48	5.05	GLOR UNTF	WV 0 2
1065	LOAD Y	49	50	10.10	48	5.05	GLOR UNTF	WV 0 2
1066	LOAD X	50	51	0.00	48	5.05	GLOR UNTF	WV 0 2
1067	LOAD Y	50	51	5.05	48	5.05	GLOR UNTF	WV 0 2
1068	LOAD X	50	51	10.10	48	5.05	GLOR UNTF	WV 0 2
1069	LOAD Y	51	52	0.00	21	5.05	GLOR UNTF	WV 0 2
1070	LOAD X	51	52	0.00	12	5.05	GLOR UNTF	WV 0 2
1071	LOAD Y	51	52	5.05	21	5.05	GLOR UNTF	WV 0 2
1072	LOAD X	51	52	5.05	12	5.05	GLOR UNTF	WV 0 2
1073	LOAD Y	51	52	10.10	20	5.05	GLOR UNTF	WV 0 2
1074	LOAD X	51	52	10.10	12	5.05	GLOR UNTF	WV 0 2
1075	LOAD Y	52	53	0.00	20	5.05	GLOR UNTF	WV 0 2
1076	LOAD X	52	53	0.00	12	5.05	GLOR UNTF	WV 0 2
1077	LOAD Y	52	53	5.05	20	5.05	GLOR UNTF	WV 0 2
1078	LOAD X	52	53	5.05	11	5.05	GLOR UNTF	WV 0 2
1079	LOAD Y	52	53	10.10	19	5.05	GLOR UNTF	WV 0 2
1080	LOAD X	52	53	10.10	11	5.05	GLOR UNTF	WV 0 2
1081	LOAD Y	53	54	0.00	18	5.05	GLOR UNTF	WV 0 2
1082	LOAD X	53	54	0.00	11	5.05	GLOR UNTF	WV 0 2
1083	LOAD Y	53	54	5.05	19	5.05	GLOR UNTF	WV 0 2
1084	LOAD X	53	54	5.05	11	5.05	GLOR UNTF	WV 0 2
1085	LOAD Y	53	54	10.10	20	5.05	GLOR UNTF	WV 0 2
1086	LOAD X	53	54	10.10	11	5.05	GLOR UNTF	WV 0 2
1087	LOAD Y	54	49	0.00	20	5.05	GLOR UNTF	WV 0 2
1088	LOAD X	54	49	0.00	12	5.05	GLOR UNTF	WV 0 2
1089	LOAD Y	54	49	5.05	20	5.05	GLOR UNTF	WV 0 2
1090	LOAD X	54	49	5.05	12	5.05	GLOR UNTF	WV 0 2
1091	LOAD Y	54	49	10.10	21	5.05	GLOR UNTF	WV 0 2
1092	LOAD X	54	49	10.10	12	5.05	GLOR UNTF	WV 0 2



LINE	A	1	2	3	4	5	6	7	8
1093	LOAD	X	50	52	0.00	17	5.05	14	GLOR UNTE
1094	LOAD	Y	50	52	0.00	17	5.05	09	GLOR UNTE
1095	LOAD	X	50	52	5.05	16	5.05	16	GLOR UNTE
1096	LOAD	Y	50	52	5.05	09	5.05	09	GLOR UNTE
1097	LOAD	X	50	52	10.10	16	5.05	16	GLOR UNTE
1098	LOAD	Y	50	52	10.10	09	5.05	09	GLOR UNTE
1099	LOAD	X	52	54	0.00	37	5.05	37	GLOR UNTE
1100	LOAD	Y	52	54	5.05	37	5.05	37	GLOR UNTE
1101	LOAD	X	54	50	0.00	16	5.05	16	GLOR UNTE
1102	LOAD	Y	54	50	0.00	09	5.05	09	GLOR UNTE
1103	LOAD	X	54	50	5.05	16	5.05	16	GLOR UNTE
1104	LOAD	Y	54	50	5.05	09	5.05	09	GLOR UNTE
1105	LOAD	X	54	50	10.10	16	5.05	17	GLOR UNTE
1106	LOAD	Y	54	50	10.10	09	5.05	10	GLOR UNTE
1107	LOAD	X	11	22	0.00	21	13.44	21	GLOR UNTE
1108	LOAD	Y	11	22	0.00	1	13.44	1	GLOR UNTE
1109	LOAD	X	11	22	0.00	1	13.44	1	GLOR UNTE
1110	LOAD	Y	11	22	0.00	1	13.44	1	GLOR UNTE
1111	LOAD	X	11	22	13.44	21	13.44	22	GLOR UNTE
1112	LOAD	Y	11	22	13.44	1	13.44	1	GLOR UNTE
1113	LOAD	X	11	22	13.44	1	13.44	23	GLOR UNTE
1114	LOAD	Y	11	22	26.88	1	13.44	1	GLOR UNTE
1115	LOAD	X	11	22	26.88	22	13.44	1	GLOR UNTE
1116	LOAD	Y	11	22	26.88	1	13.44	1	GLOR UNTE
1117	LOAD	X	11	24	0.00	1	13.44	1	GLOR UNTE
1118	LOAD	Y	11	24	0.00	21	13.44	21	GLOR UNTE
1119	LOAD	X	11	24	0.00	1	13.44	1	GLOR UNTE
1120	LOAD	Y	11	24	13.44	1	13.44	1	GLOR UNTE
1121	LOAD	X	11	24	13.44	21	13.44	22	GLOR UNTE
1122	LOAD	Y	11	24	13.44	1	13.44	1	GLOR UNTE
1123	LOAD	X	11	24	26.88	1	13.44	1	GLOR UNTE
1124	LOAD	Y	11	24	26.88	22	13.44	23	GLOR UNTE
1125	LOAD	X	11	24	26.88	1	13.44	1	GLOR UNTE
1126	LOAD	Y	11	24	0.00	03	13.44	03	GLOR UNTE
1127	LOAD	X	13	24	0.00	10	13.44	10	GLOR UNTE
1128	LOAD	Y	13	24	0.00	09	13.44	09	GLOR UNTE
1129	LOAD	X	13	24	13.44	03	13.44	03	GLOR UNTE
1130	LOAD	Y	13	24	13.44	15	13.44	15	GLOR UNTE
1131	LOAD	X	13	24	13.44	09	13.44	09	GLOR UNTE
1132	LOAD	Y	13	24	26.88	03	13.44	03	GLOR UNTE
1133	LOAD	X	13	24	26.88	15	13.44	15	GLOR UNTE
1134	LOAD	Y	13	24	26.88	09	13.44	10	GLOR UNTE
1135	LOAD	X	13	26	0.00	03	13.44	03	GLOR UNTE
1136	LOAD	Y	13	26	0.00	10	13.44	10	GLOR UNTE
1137	LOAD	X	13	26	0.00	07	13.44	07	GLOR UNTE
1138	LOAD	Y	13	26	13.44	03	13.44	03	GLOR UNTE
1139	LOAD	X	13	26	13.44	10	13.44	10	GLOR UNTE
1140	LOAD	Y	13	26	13.44	07	13.44	07	GLOR UNTE
1141	LOAD	X	13	26	26.88	03	13.44	03	GLOR UNTE
1142	LOAD	Y	13	26	26.88	10	13.44	10	GLOR UNTE



SEALION-2

LINE NO.	1	2	3	4	5	6	7	8
1143	LOAD	2	13	26	26.48	07	13.44	07
1144	LOAD	X	15	26	0.00	03	13.44	03
1145	LOAD	Y	15	26	0.00	14	13.44	14
1146	LOAD	Z	15	26	0.00	07	13.44	07
1147	LOAD	X	15	26	13.44	03	13.44	03
1148	LOAD	Y	15	26	13.44	14	13.44	14
1149	LOAD	Z	15	26	13.44	07	13.44	07
1150	LOAD	X	15	26	26.48	03	13.44	03
1151	LOAD	Y	15	26	26.48	14	13.44	14
1152	LOAD	Z	15	26	26.48	07	13.44	07
1153	LOAD	X	15	22	0.00	03	13.44	03
1154	LOAD	Y	15	22	0.00	14	13.44	14
1155	LOAD	Z	15	22	0.00	09	13.44	09
1156	LOAD	X	15	22	13.44	03	13.44	03
1157	LOAD	Y	15	22	13.44	14	13.44	14
1158	LOAD	Z	15	22	13.44	09	13.44	09
1159	LOAD	X	15	22	26.48	03	13.44	03
1160	LOAD	Y	15	22	26.48	14	13.44	14
1161	LOAD	Z	15	22	26.48	09	13.44	09
1162	LOAD	X	22	36	0.00	1	18.20	1
1163	LOAD	Y	22	36	0.00	29	18.20	29
1164	LOAD	Z	22	36	0.00	1	18.20	1
1165	LOAD	X	22	36	18.20	1	18.20	1
1166	LOAD	Y	22	36	18.20	31	18.20	31
1167	LOAD	Z	22	36	18.20	1	18.20	1
1168	LOAD	X	22	36	36.39	1	18.20	1
1169	LOAD	Y	22	36	36.39	34	18.20	34
1170	LOAD	Z	22	36	36.39	1	18.20	1
1171	LOAD	X	24	38	0.00	09	20.96	09
1172	LOAD	Y	24	38	0.00	12	20.96	12
1173	LOAD	Z	24	38	0.00	11	20.96	11
1174	LOAD	X	24	38	20.96	09	20.96	09
1175	LOAD	Y	24	38	20.96	12	20.96	12
1176	LOAD	Z	24	38	20.96	12	20.96	12
1177	LOAD	X	24	38	41.93	09	20.96	09
1178	LOAD	Y	24	38	41.93	12	20.96	12
1179	LOAD	Z	24	38	41.93	11	20.96	11
1180	LOAD	X	26	38	0.00	06	13.65	06
1181	LOAD	Y	26	38	0.00	11	13.65	11
1182	LOAD	Z	26	38	0.00	10	13.65	10
1183	LOAD	X	26	38	13.65	07	13.65	07
1184	LOAD	Y	26	38	13.65	11	13.65	11
1185	LOAD	Z	26	38	13.65	14	13.65	14
1186	LOAD	X	26	38	27.29	09	13.65	09
1187	LOAD	Y	26	38	27.29	14	13.65	14
1188	LOAD	Z	26	38	27.29	13	13.65	13
1189	LOAD	X	26	38	40.00	09	13.65	09
1190	LOAD	Y	26	38	40.00	14	13.65	14
1191	LOAD	Z	26	38	40.00	14	13.65	14
1192	LOAD	X	34	49	0.00	02	11.24	02



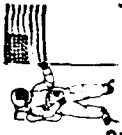
SEATTLE-2

LINE NO.	1	2	3	4	5	6	7	8
1193	LOAD	Y	34	49	0.00	34	11.46	42
1194	LOAD	Z	34	49	0.00	1	11.46	42
1195	LOAD	X	34	49	11.46	02	11.46	42
1196	LOAD	Y	34	49	11.46	42	11.46	46
1197	LOAD	Z	34	49	11.46	02	11.46	42
1198	LOAD	X	34	49	23.72	02	11.46	42
1199	LOAD	Y	34	49	23.72	46	11.46	53
1200	LOAD	Z	34	49	23.72	02	11.46	42
1201	LOAD	X	34	49	35.54	02	11.46	42
1202	LOAD	Y	34	49	35.54	53	11.46	40
1203	LOAD	Z	34	49	35.54	02	11.46	42
1204	LOAD	X	34	51	0.00	06	9.29	07
1205	LOAD	Y	34	51	0.00	11	9.29	13
1206	LOAD	Z	34	51	0.00	13	9.29	15
1207	LOAD	X	34	51	9.29	07	9.29	04
1208	LOAD	Y	34	51	9.29	13	9.29	15
1209	LOAD	Z	34	51	9.29	15	9.29	17
1210	LOAD	X	34	51	18.57	04	9.29	09
1211	LOAD	Y	34	51	18.57	15	9.29	17
1212	LOAD	Z	34	51	18.57	17	9.29	19
1213	LOAD	X	34	51	27.46	09	9.29	10
1214	LOAD	Y	34	51	27.46	17	9.29	19
1215	LOAD	Z	34	51	27.46	19	9.29	21
1216	LOAD	X	34	51	37.14	10	9.29	11
1217	LOAD	Y	34	51	37.14	19	9.29	22
1218	LOAD	Z	34	51	37.14	21	9.29	24
1219	LOAD	X	34	51	46.43	11	9.29	13
1220	LOAD	Y	34	51	46.43	22	9.29	24
1221	LOAD	Z	34	51	46.43	24	9.29	27
1222	LOAD	X	34	53	0.00	10	15.41	11
1223	LOAD	Y	34	53	0.00	24	15.41	27
1224	LOAD	Z	34	53	0.00	16	15.41	17
1225	LOAD	X	34	53	15.41	11	15.41	12
1226	LOAD	Y	34	53	15.41	27	15.41	30
1227	LOAD	Z	34	53	15.41	17	15.41	20
1228	LOAD	X	34	53	31.62	12	15.41	13
1229	LOAD	Y	34	53	31.62	30	15.41	33
1230	LOAD	Z	34	53	31.62	20	15.41	22
1231	LOAD	X	55	58	0.00	117	5.70	130
1232	LOAD	Y	55	58	5.70	150	5.70	146
1233	LOAD	Z	55	58	11.40	146	5.70	143
1234	LOAD	X	55	58	17.10	163	5.70	145
1235	LOAD	Y	55	58	22.80	145	5.70	210
1236	LOAD	Z	55	61	0.00	210	5.97	229
1237	LOAD	X	55	61	3.97	229	5.97	248
1238	LOAD	Y	55	61	7.95	248	5.97	275
1239	LOAD	Z	55	59	0.00	117	5.70	130
1240	LOAD	X	56	59	5.70	150	5.70	146
1241	LOAD	Y	56	59	11.40	146	5.70	143
1242	LOAD	Z	56	59	17.10	143	5.70	145



SPALLS

LINE NO.	1	2	3	4	5	6	7	8
1243	LOAD V	54	50	22.80=	185	5.70=	210	GLOR UNIF
1244	LOAD V	50	44	6.00=	210	3.97=	220	GLOR UNIF
1245	LOAD V	50	60	3.97=	220	3.97=	240	GLOR UNIF
1246	LOAD V	50	60	7.95=	240	3.97=	275	GLOR UNIF
1247	LOAD V	57	60	6.00=	100	5.70=	110	GLOR UNIF
1248	LOAD V	57	60	5.70=	110	5.70=	120	GLOR UNIF
1249	LOAD V	57	60	11.40=	120	5.70=	140	GLOR UNIF
1250	LOAD V	57	60	17.10=	140	5.70=	163	GLOR UNIF
1251	LOAD V	57	60	22.80=	163	5.70=	183	GLOR UNIF
1252	LOAD V	60	70	0.00=	183	2.00=	192	GLOR UNIF
1253	LOAD V	60	70	2.00=	192	2.00=	200	GLOR UNIF
1254	LOAD V	60	70	4.00=	200	2.00=	210	GLOR UNIF
1255	LOAD V	70	67	0.00=	209	1.35=	215	GLOR UNIF
1256	LOAD V	70	67	1.35=	215	1.35=	223	GLOR UNIF
1257	LOAD V	70	67	2.71=	223	1.35=	231	GLOR UNIF
1258	LOAD V	58	50	0.00=	70	9.67=	70	GLOR UNIF
1259	LOAD V	58	50	9.67=	70	9.67=	70	GLOR UNIF
1260	LOAD V	58	50	19.33=	70	9.67=	70	GLOR UNIF
1261	LOAD V	50	60	0.00=	32	9.67=	31	GLOR UNIF
1262	LOAD V	50	60	0.00=	19	9.67=	18	GLOR UNIF
1263	LOAD X	50	60	9.67=	31	9.67=	30	GLOR UNIF
1264	LOAD V	50	60	9.67=	18	9.67=	17	GLOR UNIF
1265	LOAD X	50	60	19.33=	30	9.67=	28	GLOR UNIF
1266	LOAD V	50	60	19.33=	17	9.67=	16	GLOR UNIF
1267	LOAD X	60	58	0.00=	24	9.67=	30	GLOR UNIF
1268	LOAD V	60	58	0.00=	16	9.67=	17	GLOR UNIF
1269	LOAD X	60	58	9.67=	30	9.67=	31	GLOR UNIF
1270	LOAD V	60	58	9.67=	17	9.67=	18	GLOR UNIF
1271	LOAD X	60	58	19.33=	31	9.67=	32	GLOR UNIF
1272	LOAD V	60	58	19.33=	18	9.67=	10	GLOR UNIF
1273	LOAD V	50	61	0.00=	70	8.65=	61	GLOR UNIF
1274	LOAD V	50	61	8.65=	81	8.65=	88	GLOR UNIF
1275	LOAD V	50	61	17.24=	88	8.65=	97	GLOR UNIF
1276	LOAD X	60	60	0.00=	22	6.25=	25	GLOR UNIF
1277	LOAD V	60	60	0.00=	26	6.25=	29	GLOR UNIF
1278	LOAD Z	60	60	0.00=	23	6.25=	25	GLOR UNIF
1279	LOAD X	60	60	6.25=	25	6.25=	27	GLOR UNIF
1280	LOAD V	60	60	6.25=	29	6.25=	32	GLOR UNIF
1281	LOAD Z	60	60	5.25=	25	6.25=	24	GLOR UNIF
1282	LOAD X	60	60	12.49=	27	6.25=	30	GLOR UNIF
1283	LOAD V	60	60	12.49=	32	6.25=	34	GLOR UNIF
1284	LOAD Z	60	60	12.49=	24	6.25=	31	GLOR UNIF
1285	LOAD X	60	60	14.74=	30	6.25=	33	GLOR UNIF
1286	LOAD V	60	60	14.74=	36	6.25=	50	GLOR UNIF
1287	LOAD Z	60	60	14.74=	31	6.25=	50	GLOR UNIF
1288	LOAD X	58	67	0.00=	25	7.69=	27	GLOR UNIF
1289	LOAD V	58	67	0.00=	50	7.69=	52	GLOR UNIF
1290	LOAD Z	58	67	0.00=	26	7.69=	24	GLOR UNIF
1291	LOAD X	58	67	7.69=	27	7.69=	28	GLOR UNIF
1292	LOAD V	58	67	7.69=	32	7.69=	34	GLOR UNIF

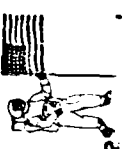


SPATIUM=2

LINE NO.	1	2	3	4	5	6	7	8
1293	LOAD	2	58	67	7.40	28	7.49	29
1294	LOAD	3	58	67	15.34	28	7.49	30
1295	LOAD	4	58	67	15.34	34	7.49	36
1296	LOAD	5	58	67	15.34	20	7.49	51
1297	LOAD	6	58	67	0.00	34	2.02	40
1298	LOAD	7	70	66	2.02	40	2.02	43
1299	LOAD	8	70	66	0.00	41	2.02	43
1300	LOAD	9	70	66	0.00	38	2.02	40
1301	LOAD	10	70	66	2.02	40	2.02	41
1302	LOAD	11	70	66	0.00	41	2.02	43
1303	LOAD	12	70	66	0.00	41	2.02	43
1304	LOAD	13	70	66	0.00	41	2.02	43
1305	LOAD	14	70	66	0.00	41	2.02	43
1306	LOAD	15	70	66	0.00	41	2.02	43
1307	LOAD	16	70	66	0.00	41	2.02	43
1308	LOAD	17	70	66	0.00	41	2.02	43
1309	LOAD	18	70	66	0.00	41	2.02	43
1310	LOAD	19	70	66	0.00	41	2.02	43
1311	LOAD	20	70	66	0.00	41	2.02	43
1312	LOAD	21	70	66	0.00	41	2.02	43
1313	LOAD	22	70	66	0.00	41	2.02	43
1314	LOAD	23	70	66	0.00	41	2.02	43
1315	LOAD	24	70	66	0.00	41	2.02	43
1316	LOAD	25	70	66	0.00	41	2.02	43
1317	LOAD	26	70	66	0.00	41	2.02	43
1318	LOAD	27	70	66	0.00	41	2.02	43
1319	LOAD	28	70	66	0.00	41	2.02	43
1320	LOAD	29	70	66	0.00	41	2.02	43
1321	LOAD	30	70	66	0.00	41	2.02	43
1322	LOAD	31	70	66	0.00	41	2.02	43
1323	LOAD	32	70	66	0.00	41	2.02	43
1324	LOAD	33	70	66	0.00	41	2.02	43
1325	LOAD	34	70	66	0.00	41	2.02	43
1326	LOAD	35	70	66	0.00	41	2.02	43
1327	LOAD	36	70	66	0.00	41	2.02	43
1328	LOAD	37	70	66	0.00	41	2.02	43
1329	LOAD	38	70	66	0.00	41	2.02	43
1330	LOAD	39	70	66	0.00	41	2.02	43
1331	LOAD	40	70	66	0.00	41	2.02	43
1332	LOAD	41	70	66	0.00	41	2.02	43
1333	LOAD	42	70	66	0.00	41	2.02	43
1334	LOAD	43	70	66	0.00	41	2.02	43
1335	LOAD	44	70	66	0.00	41	2.02	43
1336	LOAD	45	70	66	0.00	41	2.02	43
1337	LOAD	46	70	66	0.00	41	2.02	43
1338	LOAD	47	70	66	0.00	41	2.02	43
1339	LOAD	48	70	66	0.00	41	2.02	43
1340	LOAD	49	70	66	0.00	41	2.02	43
1341	LOAD	50	70	66	0.00	41	2.02	43
1342	LOAD	51	70	66	0.00	41	2.02	43

SEAL 100-2

LINE NO.	1	2	3	4	5	6	7	8
1343	LOAD	2	23	1.71	-.041	20.96	GLOR UNIT	DL 0 3
1344	LOAD	2	23	1.71	-.041	20.96	GLOR UNIT	DL 0 3
1345	LOAD	2	24	1.71	-.041	20.96	GLOR UNIT	DL 0 3
1346	LOAD	2	25	1.71	-.041	20.96	GLOR UNIT	DL 0 3
1347	LOAD	2	26	1.71	-.041	20.96	GLOR UNIT	DL 0 3
1348	LOAD	2	27	1.71	-.041	20.96	GLOR UNIT	DL 0 3
1349	LOAD	2	27	1.71	-.047	21.55	GLOR UNIT	DL 0 3
1350	LOAD	2	27	1.71	-.047	21.55	GLOR UNIT	DL 0 3
1351	LOAD	2	27	1.71	-.047	21.55	GLOR UNIT	DL 0 3
1352	LOAD	2	30	1.71	-.057	16.35	GLOR UNIT	DL 0 3
1353	LOAD	2	30	1.71	-.057	16.35	GLOR UNIT	DL 0 3
1354	LOAD	2	34	1.71	-.057	16.35	GLOR UNIT	DL 0 3
1355	LOAD	2	37	1.71	-.057	16.35	GLOR UNIT	DL 0 3
1356	LOAD	2	37	1.71	-.057	16.35	GLOR UNIT	DL 0 3
1357	LOAD	2	38	1.71	-.057	16.35	GLOR UNIT	DL 0 3
1358	LOAD	2	35	1.71	-.043	16.35	GLOR UNIT	DL 0 3
1359	LOAD	2	37	1.71	-.043	16.35	GLOR UNIT	DL 0 3
1360	LOAD	2	30	1.71	-.043	16.35	GLOR UNIT	DL 0 3
1361	LOAD	2	40	1.71	-.072	11.73	GLOR UNIT	DL 0 3
1362	LOAD	2	50	1.71	-.072	11.73	GLOR UNIT	DL 0 3
1363	LOAD	2	51	1.71	-.072	11.73	GLOR UNIT	DL 0 3
1364	LOAD	2	52	1.71	-.072	11.73	GLOR UNIT	DL 0 3
1365	LOAD	2	53	1.71	-.072	11.73	GLOR UNIT	DL 0 3
1366	LOAD	2	54	1.71	-.072	11.73	GLOR UNIT	DL 0 3
1367	LOAD	2	50	1.71	-.057	11.73	GLOR UNIT	DL 0 3
1368	LOAD	2	52	1.71	-.057	11.72	GLOR UNIT	DL 0 3
1369	LOAD	2	54	1.71	-.057	11.73	GLOR UNIT	DL 0 3
1370	LOAD	2	11	1.71	-.072	36.90	GLOR UNIT	DL 0 3
1371	LOAD	2	11	1.71	-.072	36.90	GLOR UNIT	DL 0 3
1372	LOAD	2	13	1.71	-.072	36.90	GLOR UNIT	DL 0 3
1373	LOAD	2	13	1.71	-.072	36.90	GLOR UNIT	DL 0 3
1374	LOAD	2	15	1.71	-.072	36.90	GLOR UNIT	DL 0 3
1375	LOAD	2	15	1.71	-.072	36.90	GLOR UNIT	DL 0 3
1376	LOAD	2	22	1.71	-.112	49.76	GLOR UNIT	DL 0 3
1377	LOAD	2	24	1.71	-.112	49.76	GLOR UNIT	DL 0 3
1378	LOAD	2	26	1.71	-.112	49.76	GLOR UNIT	DL 0 3
1379	LOAD	2	36	1.71	-.112	49.76	GLOR UNIT	DL 0 3
1380	LOAD	2	38	1.71	-.112	49.76	GLOR UNIT	DL 0 3
1381	LOAD	2	38	1.71	-.112	49.76	GLOR UNIT	DL 0 3
1382	LOAD	2	4	1.71	-.144	2.50	GLOR UNIT	DL 0 3
1383	LOAD	2	7	1.71	-.144	2.50	GLOR UNIT	DL 0 3
1384	LOAD	2	5	1.71	-.144	2.50	GLOR UNIT	DL 0 3
1385	LOAD	2	8	1.71	-.144	2.50	GLOR UNIT	DL 0 3
1386	LOAD	2	4	1.71	-.144	2.50	GLOR UNIT	DL 0 3
1387	LOAD	2	9	1.71	-.144	2.50	GLOR UNIT	DL 0 3
1388	LOAD	2	16	1.71	-.144	2.50	GLOR UNIT	DL 0 3
1389	LOAD	2	19	1.71	-.144	2.50	GLOR UNIT	DL 0 3
1390	LOAD	2	17	1.71	-.144	2.50	GLOR UNIT	DL 0 3
1391	LOAD	2	20	1.71	-.144	2.50	GLOR UNIT	DL 0 3
1392	LOAD	2	18	1.71	-.144	2.50	GLOR UNIT	DL 0 3



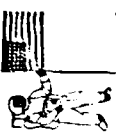
SEALANT-2

LINE NO.	1	2	3	4	5	6	7	8
1393	LOAD	2	21	24	0.00	-0.148	2.50	GLOR UNTF
1394	LOAD	2	28	31	0.00	-0.148	2.50	GLOR UNTF
1395	LOAD	2	31	34	0.00	-0.148	2.50	GLOR UNTF
1396	LOAD	2	29	32	0.00	-0.148	2.50	GLOR UNTF
1397	LOAD	2	32	36	0.00	-0.148	2.50	GLOR UNTF
1398	LOAD	2	30	33	0.00	-0.148	2.50	GLOR UNTF
1399	LOAD	2	33	34	0.00	-0.148	2.50	GLOR UNTF
1400	LOAD	2	43	46	0.00	-0.148	2.50	GLOR UNTF
1401	LOAD	2	44	49	0.00	-0.148	2.50	GLOR UNTF
1402	LOAD	2	44	47	0.00	-0.148	2.50	GLOR UNTF
1403	LOAD	2	47	51	0.00	-0.148	2.50	GLOR UNTF
1404	LOAD	2	45	48	0.00	-0.148	2.50	GLOR UNTF
1405	LOAD	2	48	53	0.00	-0.148	2.50	GLOR UNTF
1406	LOAD	2	55	58	0.00	-0.403	23.00	GLOR UNTF
1407	LOAD	2	55	58	23.00	-0.464	5.50	GLOR UNTF
1408	LOAD	2	54	61	0.00	-0.464	15.00	GLOR UNTF
1409	LOAD	2	61	71	0.00	-0.464	15.00	GLOR UNTF
1410	LOAD	2	56	59	0.00	-0.403	23.00	GLOR UNTF
1411	LOAD	2	56	59	23.00	-0.464	5.50	GLOR UNTF
1412	LOAD	2	50	64	0.00	-0.464	15.00	GLOR UNTF
1413	LOAD	2	64	72	0.00	-0.464	15.00	GLOR UNTF
1414	LOAD	2	57	60	0.00	-0.403	23.00	GLOR UNTF
1415	LOAD	2	57	60	23.00	-0.464	5.50	GLOR UNTF
1416	LOAD	2	60	70	0.00	-0.464	9.00	GLOR UNTF
1417	LOAD	2	70	67	0.00	-0.464	9.00	GLOR UNTF
1418	LOAD	2	67	76	0.00	-0.464	4.00	GLOR UNTF
1419	LOAD	2	76	75	0.00	-0.464	11.00	GLOR UNTF
1420	LOAD	2	58	59	1.71	-0.65	25.58	GLOR UNTF
1421	LOAD	2	59	60	1.71	-0.65	25.58	GLOR UNTF
1422	LOAD	2	60	58	1.71	-0.65	25.58	GLOR UNTF
1423	LOAD	2	59	61	1.71	-0.65	29.23	GLOR UNTF
1424	LOAD	2	60	64	1.71	-0.65	29.23	GLOR UNTF
1425	LOAD	2	58	67	1.71	-0.65	29.23	GLOR UNTF
1426	LOAD	2	70	66	1.59	-0.19	10.27	GLOR UNTF
1427	LOAD	2	70	68	1.59	-0.19	10.27	GLOR UNTF
1428	LOAD	2	76	77	1.71	-0.50	14.78	GLOR UNTF
1429	LOAD	2	74	78	1.71	-0.50	14.78	GLOR UNTF
1430	LOAD	2	61	62	0.00	-0.55	4.50	GLOR UNTF
1431	LOAD	2	62	63	0.00	-0.55	20.00	GLOR UNTF
1432	LOAD	2	63	64	0.00	-0.55	4.50	GLOR UNTF
1433	LOAD	2	64	65	0.00	-0.55	8.75	GLOR UNTF
1434	LOAD	2	65	67	0.00	-0.55	20.25	GLOR UNTF
1435	LOAD	2	67	69	0.00	-0.55	20.25	GLOR UNTF
1436	LOAD	2	69	61	0.00	-0.55	8.75	GLOR UNTF
1437	LOAD	2	63	65	0.00	-0.24	7.50	GLOR UNTF
1438	LOAD	2	65	66	0.00	-0.24	17.61	GLOR UNTF
1439	LOAD	2	66	67	0.00	-0.24	10.00	GLOR UNTF
1440	LOAD	2	67	68	0.00	-0.24	10.00	GLOR UNTF
1441	LOAD	2	68	69	0.00	-0.24	17.61	GLOR UNTF
1442	LOAD	2	69	62	0.00	-0.24	7.50	GLOR UNTF



S&A 1-1A1-2

LINE NO.	1	2	3	4	5	6	7	8
1443	LOAD Z	71	73	0.00	-0.055	3.00	-0.055	DL 0 3
1444	LOAD Z	71	72	0.00	-0.055	29.00	-0.055	GLOR UNTF
1445	LOAD Z	72	74	0.00	-0.055	3.00	-0.055	GLOR UNTF
1446	LOAD Z	71	81	0.00	-0.055	5.00	-0.055	GLOR UNTF
1447	LOAD Z	71	77	0.00	-0.055	25.11	-0.055	GLOR UNTF
1448	LOAD Z	77	83	0.00	-0.055	5.00	-0.055	GLOR UNTF
1449	LOAD Z	72	82	0.00	-0.055	5.00	-0.055	GLOR UNTF
1450	LOAD Z	72	78	0.00	-0.055	25.11	-0.055	GLOR UNTF
1451	LOAD Z	78	84	0.00	-0.055	5.00	-0.055	GLOR UNTF
1452	LOAD Z	77	79	0.00	-0.055	3.00	-0.055	GLOR UNTF
1453	LOAD Z	77	75	0.00	-0.055	14.51	-0.055	GLOR UNTF
1454	LOAD Z	75	78	0.00	-0.055	14.51	-0.055	GLOR UNTF
1455	LOAD Z	78	80	0.00	-0.055	3.00	-0.055	GLOR UNTF
1456	LOAD Z	71	75	0.00	-0.016	29.00	-0.016	GLOR UNTF
1457	LOAD Z	72	75	0.00	-0.016	29.00	-0.016	GLOR UNTF
1458	END							



NO. OF WARNING ERRORS = 67

NO. OF FATAL ERRORS = 0

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 1 JS= 1 JES= 4

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 2 JS= 4 JES= 16

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 3 JS= 16 JES= 28

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 4 JS= 28 JES= 43

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 5 JS= 43 JES= 55

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 6 JS= 2 JES= 5

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 7 JS= 5 JES= 17

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 8 JS= 17 JES= 29

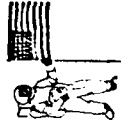
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 9 JS= 29 JES= 44

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 10 JS= 44 JES= 56

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.



MEMBERS 11 JS# 3 JES 4

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 12 JS# 6 JES 18

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 13 JS# 18 JES 60

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 14 JS# 30 JES 45

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 15 JS# 45 JES 57

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 16 JS# 4 JES 7

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 17 JS# 7 JES 10

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 18 JS# 5 JES 4

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 19 JS# 8 JES 12

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 20 JS# 6 JES 9

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 21 JS# 9 JES 14

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

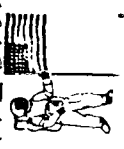
MEMBERS 22 JS# 14 JES 19

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 23 JS# 19 JES 22

*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBERS 24 JS# 17 JES 20



*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBERS AR JS= 20 JES 24

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBERS AQ JS= 18 JES 21

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBERS Q0 JS= 21 JES 24

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBERS Q1 JS= 28 JES 31

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBERS Q2 JS= 31 JES 34

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBERS Q3 JS= 29 JES 32

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBERS Q4 JS= 32 JES 36

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBERS Q5 JS= 30 JES 33

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBERS Q6 JS= 33 JES 38

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBERS Q7 JS= 43 JES 46

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBERS Q8 JS= 46 JES 49

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBERS Q9 JS= 44 JES 47

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBERS 100 JS= 47 JES 51



*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 101 JS= 45 JF= 44

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 102 JS= 44 JF= 53

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 124 JS= 61 JF= 62

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 125 JS= 62 JF= 63

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 126 JS= 63 JF= 64

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 127 JS= 64 JF= 65

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 128 JS= 65 JF= 67

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 129 JS= 67 JF= 69

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 130 JS= 69 JF= 61

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 131 JS= 63 JF= 65

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 132 JS= 65 JF= 66

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 133 JS= 66 JF= 67

*** WARNING NO. SL. 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 134 JS= 67 JF= 68

*** WARNING NO. SL. 7 ***



THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER 135 JS= 69 JF= 69
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 136 JS= 69 JF= 62
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 137 JS= 71 JF= 73
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 138 JS= 71 JF= 72
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 139 JS= 72 JF= 74
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 140 JS= 71 JF= 81
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 141 JS= 71 JF= 77
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 142 JS= 77 JF= 83
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 143 JS= 72 JF= 82
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 144 JS= 72 JF= 78
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 145 JS= 78 JF= 80
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 146 JS= 77 JF= 79
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.
MEMBER 147 JS= 77 JF= 75
*** WARNING NO. SL: 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.



MEMBER 148 JS 75 IF 7A

*** WARNING NO. SL 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER 149 JS 7A JF 40

*** WARNING NO. SL 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER 150 JS 71 JF 75

*** WARNING NO. SL 7 ***
THE MEMBER BELOW HAS A DIAMETER = 0 AND HAS BEEN SKIPPED.

MEMBER 151 JS 72 IF 75

AD-A164 421

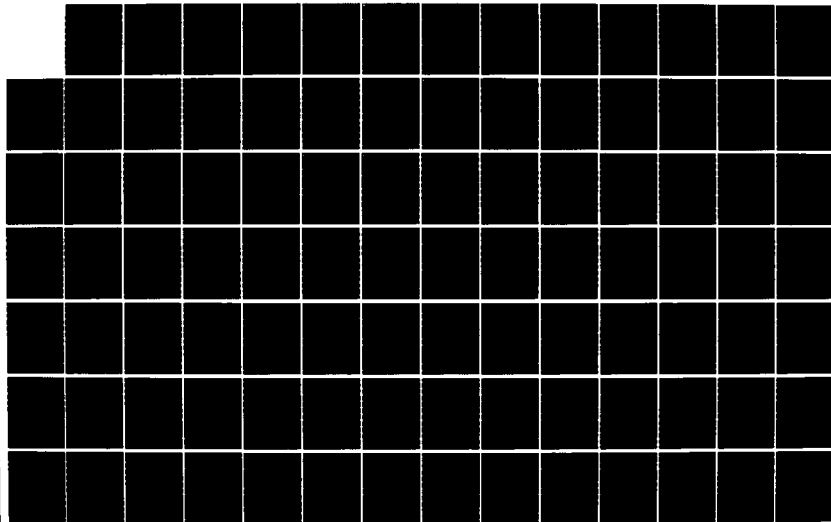
STRUCTURAL CONCEPT ANALYSIS REPORT FOR THE EAST COAST
AIR COMBAT MANEUVER. (U) CREST ENGINEERING INC TULSA OK
MAY 76 27-771-92-APP-C CHES/NAVFAC-FPD-7601-APP-C
N62477-76-C-0179

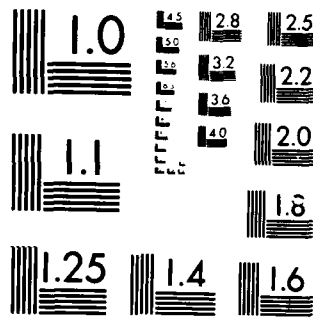
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UNCLASSIFIED

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NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



JVJZCET. 04/26/76. *UNITED COMPUTING* AT. 000000. H.0.24

17.16.55SEALOAD.CM100.7500.000				
17.16.50SEAL	40	0.000		
17.16.50SAC3000C000023.277710000	3H			
17.16.50. 04/26/76.JVJZCET				
17.16.51FL	3302	0.001		
17.16.51.GET.TAPER=SPFIE(1THRV)				
17.16.52.READY = SPFIE(1F				
17.16.52.GFT.SL2(1THRV)				
17.17.02.READY = SL2				
17.17.02.WFL.130000				
17.17.02SEFL	4096	0.001	0	0.
17.17.02SEFI	934	2		
17.17.02.SL2.				
17.17.02SEFLS	45056	0.001		
17.17.02SELA	45056	0.400	413	14
17.17.04.FL REQUIRED TO LOAD			73660R	(30640)
17.17.04.FL REQUIRED TO EXECUTE			63600R	(26496)
17.17.05SEFL	45056	0.400		
17.17.06.SSC SSL2 START SEALOAD				
17.17.32.SSC SSL2 STOP SEALOAD				
17.17.32.STOP				
17.17.32SSH* 45056	10.514	2015	177.	
17.17.32SEFI	30	2		
17.17.32.REPLACE.TAPE=S771C1.				
17.17.34.READY = S771C1				
17.17.34.CNST.				
17.17.34SEFL	4096	10.514	0	0.
17.17.34SEFI	208	1		
17.17.35.				
17.17.35.				
17.17.35SEFL	12288	10.537	11.55	5
17.17.35.EXIT.				
17.17.35SEJTON	2368	10.537		
17.17.35.				
17.17.35.*P.T. PRUS*P.F. ACC *TAPE PRUS* TAPE ACC				

A-5 SPACE FRAME ANALYSIS



11. 1. 20. 2017. 2017. 2017.

[illegible]



* STWAL
* A SYNERFORM TECHNOLOGY, INC. DEVELOPMENT *
* RELEASE 6 MAR 12 *
* MARCH 1976 *

DATE 04/27/76

30TLE ADMR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.CHERN

PROGRAM OPTIONS

THE FOLLOWING OPTIONS HAVE BEEN REQUESTED FOR THIS ANALYSIS

INPUTCARD PLUS DATA FILE INPUT

INPUT UNITS

.....ENGLISH

OUTPUT UNITS

.....ENGLISH

EXECUTION

.....UNITY CHECK

..UNITY CHECKS COMPUTED BY AMERICAN INSTITUTE OF
STEEL CONSTRUCTION 1969 CODE, SECTIONS 1.5, 1.6,
LOCAL BUCKLING STRESS OF TUBULAR MEMBERS INVE-
STIGATED BY COLUMN RESEARCH COUNCIL METHOD.
RESULTS INVALID FOR A514 STEEL.

....NO. OF SEGMENTS

....VARBL MEMR, SEGMENTS/SECT 1

LOAD

....NO. BASIC LOAD CONDS. 6

....NO. COMBINED LOAD CONDS. 2

REPORT

....TABUL FCHL AND GROUP PRIP

....JOINT DEFLECTIONS

....GROUP AND UN CHK SUMMARY

....MEMBER STRESS REPORT NO. 1

....MEMBER STRESS REPORT NO. 2

....MEMBER STRESS REPORT NO. 3

....REACTION FORCES AND MOMTS

....EQUILIBRIUM CHECK

EQUILIBRIUM CHECK FOR VALUES

....FORCES 100.00 LR

....MOMENTS 100.00 IN-LB

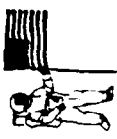
JOINT AND STRUCTURE -- S. JAY (JOINT - TRANSFER, PILING) -- C. J. HEN
T. J. JAY (JOINT - TRANSFER, PILING)

GRP	M/S	JOINT THICK FT.	WT LB.	NO IN.	AX IN.	TX IN.	IV IN.	IZ IN.	FV KSI	KV KSI	KZ KSI	SHEAR AREA IN ²	INPUT SEC LEN FT.
*** E = 29000000.0 PSI, G = 11600000.0 PSI ***													
P10	1	0.00	1.750	36.00	14.30	45360.00	27683.00	27683.00	36.0	1.0	1.0	188.30	-0.00
P20	1	0.00	1.250	36.00	136.46	41250.28	20625.14	20625.14	36.0	1.0	1.0	136.46	-0.00
JL1	1	0.00	1.500	40.00	62.05	20205.92	12102.96	12102.96	36.0	1.0	1.0	62.05	-0.00
JL2	1	0.00	1.000	41.00	125.04	50297.02	25148.51	25148.51	36.0	1.0	1.0	125.04	-0.00
AR1	2	4.83	1.625	21.00	40.00	3574.04	1747.04	1747.04	36.0	1.0	1.0	38.04	-0.00
AR2	2	3.42	1.500	14.00	27.49	2104.32	1053.16	1053.16	36.0	1.0	1.0	27.49	-0.00
AR3	2	3.42	1.500	14.00	24.55	1463.86	731.93	731.93	36.0	1.0	1.0	24.55	-0.00
AR4	2	3.42	1.500	12.75	16.05	745.60	372.80	372.80	36.0	1.0	1.0	16.05	-0.00
AR5	2	3.42	1.500	12.75	10.24	723.28	361.64	361.64	36.0	1.0	1.0	10.24	-0.00
AR6	2	3.42	1.375	12.75	14.54	548.42	274.21	274.21	36.0	1.0	1.0	14.54	-0.00
AR7	2	3.18	1.240	6.63	5.58	54.30	28.15	28.15	36.0	1.0	1.0	5.58	-0.00
STL	1	0.00	1.250	36.00	136.46	41250.28	20625.14	20625.14	36.0	1.0	1.0	136.46	-0.00

STRUCTURE - GROUP PROPERTIES REPORT

3-PILE AND STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN
WIDE FLANGE/WIDE FLANGE COMPACT MEMBER PROPERTIES

GRP	W/S	JOINT THICK FT.	FLANGE THICK IN.	FLANGE WIDTH IN.	WEB THICK IN.	FLANGE RADIUS IN.	DEPTH IN.	AX IN.	IX IN.	IV IN.	IY IN.	FY KSI	KY	KZ	IB SEC	LEN FT.	INPUT
*** E = 29000000.0 PSI, G = 11600000.0 PSI ***																	
W1A	1	0.00	.570	7.50	.358	.500	18.00	16.20	1.25	802.00	40.20	36.0	1.0	1.0	.01	0.00	
W08	1	0.00	.398	6.50	.245	.500	7.93	7.06	.34	62.50	18.20	36.0	1.0	1.0	.01	0.00	
W06	1	0.00	.269	6.00	.235	.500	6.00	4.56	.11	30.10	9.67	36.0	1.0	1.0	.01	0.00	



STATUS - GROUP PROPERTIES REPORT

PAGE 3
DATE 04/27/76

3-PILE ACWR STRUCTURE -- U.S. NAVY (36-IN. DIAPHRM PILING) -- C.C.M.K.M.
ROTATIONAL SECTION MEMBERS

GRP	W/S	THICK FT.	JOINT Z-DPTH IN.	V-DPTH IN.	AX IN2	IX IN4	IY IN4	IZ IN4	IY KSI	KX KSI	KZ KSI	INPUT SEC LEN FT.

*** E = 29000000.0 PSI, G = 11600000.0 PSI ***

WRN	2	0.00	10.00	5.00	50.00	30000.00	30000.00	30000.00	36.0	1.0	1.0	0.00
-----	---	------	-------	------	-------	----------	----------	----------	------	-----	-----	------

LINE NO.	1	2	3	4	5	6	7	8
1								
2								
3								
4								
5								
6								
7								
8								

SCT	PILING	TUR	10830	5536000	2768300	2768300	3600	1750
1	SCT PILING1	TUR	10830	5536000	2768300	2768300	3600	1750
2	SCT PILING2	TUR	13646	4125028	2062514	2062514	3600	1250
3	SCT PILING3	TUR	13646	4125028	2062514	2062514	3600	1250
4	SCT JKTIFG1	TUR	6205	2420592	1210296	1210296	4000	500
5	SCT JKTIFG2	TUR	12566	5029702	2514851	2514851	4100	1000
6	SCT HRACES1	TUR	3804	357408	178704	178704	2000	625
7	SCT HRACES2	TUR	2749	210632	105316	105316	1800	500
8	SCT HRACES3	TUR	2435	146386	73193	73193	1600	500
9	SCT BRACFS4	TUR	1605	74500	37280	37280	1400	375
10	SCT HRACFS5	TUR	1924	72328	36164	36164	1275	500
11	SCT HRACFS6	TUR	1458	55882	27941	27941	1275	375
12	SCT HRACES7	TUR	558	5630	2815	2815	6.625	280
13	SCT WTS-MIN	PRT	5069	3000000	3000000	3000000	1000	500
14	SCT SUSTFLC	TUR	13646	4125028	2062514	2062514	3600	1250
15	SCT WMS-50	-FC	1620	125	60200	4020	750	570
16	SCT WMS-24	-FC	706	34	8250	1820	650	398
17	SCT WMS-15	-FC	456	11	3010	967	600	269
18	GRUP							
19	GRUP P10 PILING1		3600	1750	2900	1160	3600	1
20	GRUP P20 PILING2		3600	1250	2900	1160	3600	1
21	GRUP JLT JKTIFG1		4000	500	2900	1160	3600	1
22	GRUP JLT JKTIFG2		4100	1000	2900	1160	3600	1
23	GRUP RMT HRACES1		2000	625	2900	1160	3600	2 483
24	GRUP RMT HRACES2		1800	500	2900	1160	3600	2 342
25	GRUP RMT HRACES3		1600	500	2900	1160	3600	2 342
26	GRUP RMT HRACES4		1400	575	2900	1160	3600	2 283
27	GRUP RMT HRACES5		1275	500	2900	1160	3600	2 342
28	GRUP RMT HRACES6		1275	375	2900	1160	3600	2 342
29	GRUP RMT HRACES7		6.625	280	2900	1160	3600	2 318
30	GRUP WMS HIGHWAY				2900	1160	3600	2
31	GRUP STL SURTIFG		3600	1250	2900	1160	3600	1
32	GRUP WMS HIGHWAY				2900	1160	3600	1
33	GRUP WMS HIGHWAY				2900	1160	3600	1
34	GRUP WMS HIGHWAY				2900	1160	3600	1
35	MEMBER							
36	MEMBER							
37	MEMBER							
38	MEMBER							
39	MEMBER							
40	MEMBER							
41	MEMBER							
42	MEMBER							
43	MEMBER							
44	MEMBER							
45	MEMBER							
46	MEMBER							
47	MEMBER							
48	MEMBER							
49	MEMBER							

3-PILE AC-4 STRUCTURE -- U.S. NAVY (46-TH, DIA-ETPM PILING) -- C.CHEUN

INPUT DATA

LINE NO.	1	2	3	4	5	6	7	8
50	MEMBER	45	57	P20				F 0000 3
51	MEMBER	10	22	J11				F 4000
52	MEMBER	22	34	J11				F 4000
53	MEMBER	34	40	J12				F 4100
54	MEMBER	40	49	J12				F 4100
55	MEMBER	49	55	J12				F 4100
56	MEMBER	12	24	J11				F 4000
57	MEMBER	24	36	J11				F 4000
58	MEMBER	36	41	J12				F 4100
59	MEMBER	41	51	J12				F 4100
60	MEMBER	51	56	J12				F 4100
61	MEMBER	14	26	J11				F 4000
62	MEMBER	26	38	J11				F 4000
63	MEMBER	38	42	J12				F 4100
64	MEMBER	42	53	J12				F 4100
65	MEMBER	53	57	J12				F 4100
66	MEMBER	10	11	HQ2				1800
67	MEMBER	11	12	HQ2				1800
68	MEMBER	12	13	HQ2				1800
69	MEMBER	13	14	HQ2				1800
70	MEMBER	14	15	HQ2				1800
71	MEMBER	15	10	AR2				1800
72	MEMBER	11	13	AR4				1400
73	MEMBER	13	15	AR4				1400
74	MEMBER	15	11	AR4				1400
75	MEMBER	22	23	HQ2				1800
76	MEMBER	23	24	HQ2				1800
77	MEMBER	24	25	HQ2				1800
78	MEMBER	25	26	HQ2				1800
79	MEMBER	26	27	HQ2				1800
80	MEMBER	27	22	HQ2				1800
81	MEMBER	23	25	AR4				1400
82	MEMBER	25	27	AR4				1400
83	MEMBER	27	23	AR4				1400
84	MEMBER	34	35	AR5				1275
85	MEMBER	35	36	AR5				1275
86	MEMBER	36	37	AR5				1275
87	MEMBER	37	38	AR5				1275
88	MEMBER	38	39	AR5				1275
89	MEMBER	39	34	AR5				1275
90	MEMBER	35	37	AR6				1275
91	MEMBER	37	39	AR6				1275
92	MEMBER	39	35	AR6				1275
93	MEMBER	49	50	AR3				1600
94	MEMBER	50	51	AR3				1600
95	MEMBER	51	52	AR3				1600
96	MEMBER	52	53	AR3				1600
97	MEMBER	53	54	AR3				1600
98	MEMBER	54	49	AR3				1600

STATUS INPUT DATA

3-PTILE AC-R STRUCTURE -- (U.S. NAVY (30-FTN. DIAMETER PILLING)) -- P. CHERN

LINE NO.	1	2	3	4	5	6	7	8
09	MEMBER	50	52	ARS				1275
100	MEMBER	52	54	ARS				1275
101	MEMBER	54	56	ARS				1600
102	MEMBER	11	22	ARS				1600
103	MEMBER	11	24	ARS				1600
104	MEMBER	13	24	ARS				1600
105	MEMBER	13	26	ARS				1600
106	MEMBER	15	26	ARS				1600
107	MEMBER	15	27	ARS				1600
108	MEMBER	22	36	ARS				2000
109	MEMBER	24	38	ARS				2000
110	MEMBER	26	38	ARS				2000
111	MEMBER	36	49	ARS				2000
112	MEMBER	38	51	ARS				2000
113	MEMBER	38	53	ARS				2000
114	MEMBER	4	7	MAN	1111			F 0000
115	MEMBER	7	10	MAN				F 0000
116	MEMBER	5	8	MAN	1111			F 0000
117	MEMBER	6	12	MAN				F 0000
118	MEMBER	6	9	MAN	1111			F 0000
119	MEMBER	9	14	MAN				F 0000
120	MEMBER	16	19	MAN	1111			F 0000
121	MEMBER	19	22	MAN				F 0000
122	MEMBER	17	20	MAN	1111			F 0000
123	MEMBER	20	24	MAN				F 0000
124	MEMBER	18	21	MAN	1111			F 0000
125	MEMBER	21	26	MAN				F 0000
126	MEMBER	28	31	MAN	1111			F 0000
127	MEMBER	31	34	MAN				F 0000
128	MEMBER	29	32	MAN	1111			F 0000
129	MEMBER	32	36	MAN				F 0000
130	MEMBER	30	33	MAN	1111			F 0000
131	MEMBER	33	38	MAN				F 0000
132	MEMBER	43	46	MAN	1111			F 0000
133	MEMBER	46	49	MAN				F 0000
134	MEMBER	44	47	MAN	1111			F 0000
135	MEMBER	47	51	MAN				F 0000
136	MEMBER	45	48	MAN	1111			F 0000
137	MEMBER	48	53	MAN				F 0000
138	MEMBER	55	58	STL				3600
139	MEMBER	58	61	STL				3600
140	MEMBER	61	71	STL				3600
141	MEMBER	56	59	STL				3600
142	MEMBER	59	64	STL				3600
143	MEMBER	64	72	STL				3600
144	MEMBER	57	60	STL				3600
145	MEMBER	60	70	STL				3600
146	MEMBER	70	67	STL				3600
147	MEMBER	67	76	STL				3600



S I G N I F I C A N T D A T A

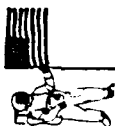
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CAPTIF ACW STRUCTURE -- U.S. NAVY (30-10, DIAMETER PILING) -- C. CHERN

LINE NO. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96

MEMBER	74	75	STI	3600
MEMBER	54	59	ROS	1275
MEMBER	50	60	ROS	1275
MEMBER	60	58	ROS	1275
MEMBER	59	61	ROS	1275
MEMBER	60	64	ROS	1275
MEMBER	58	67	ROS	1275
MEMBER	70	66	ROS	6.625
MEMBER	70	64	ROS	6.625
MEMBER	74	77	ROS	1275
MEMBER	74	78	ROS	1275
MEMBER	61	62	ROS	0000
MEMBER	62	63	ROS	0000
MEMBER	63	64	ROS	0000
MEMBER	64	65	ROS	0000
MEMBER	65	67	ROS	0000
MEMBER	67	69	ROS	0000
MEMBER	69	61	ROS	0000
MEMBER	63	65	ROS	0000
MEMBER	65	66	ROS	0000
MEMBER	66	67	ROS	0000
MEMBER	67	68	ROS	0000
MEMBER	68	69	ROS	0000
MEMBER	69	62	ROS	0000
MEMBER	71	73	ROS	0000
MEMBER	71	72	ROS	0000
MEMBER	72	70	ROS	0000
MEMBER	71	81	ROS	0000
MEMBER	71	77	ROS	0000
MEMBER	77	83	ROS	0000
MEMBER	72	82	ROS	0000
MEMBER	72	74	ROS	0000
MEMBER	74	84	ROS	0000
MEMBER	77	79	ROS	0000
MEMBER	77	75	ROS	0000
MEMBER	75	74	ROS	0000
MEMBER	74	80	ROS	0000
MEMBER	71	75	ROS	0000
MEMBER	72	75	ROS	0000
JOINT	1	2987	-1725	-600
JOINT	2	-2987	-1725	-600
JOINT	3	000	3489	-600
JOINT	4	2910	-1684	0
JOINT	5	-2910	-1684	0
JOINT	6	0	3559	0
JOINT	7	2900	-1924	0
JOINT	8	-2900	-1924	0
JOINT	9	0	3599	0

PILING A
PILING B
PILING C
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MULTIF
MULTIF
MULTIF



S T R A N G E P U T I A T A

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LITTLE ACME STRUCTURE -- U.S. NAVY (SM-1A DIAMETER PILING) -- C. CHERRY

LINE NO. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58

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3-411 AC-9 STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHEAN

LINE NO.	1	2	3	4	5	6	7	8
1	1	2	3	4	5	6	7	8
2	1	2	3	4	5	6	7	8
3	1	2	3	4	5	6	7	8
4	1	2	3	4	5	6	7	8
5	1	2	3	4	5	6	7	8
6	1	2	3	4	5	6	7	8
7	1	2	3	4	5	6	7	8
8	1	2	3	4	5	6	7	8
9	1	2	3	4	5	6	7	8
10	1	2	3	4	5	6	7	8
11	1	2	3	4	5	6	7	8
12	1	2	3	4	5	6	7	8
13	1	2	3	4	5	6	7	8
14	1	2	3	4	5	6	7	8
15	1	2	3	4	5	6	7	8
16	1	2	3	4	5	6	7	8
17	1	2	3	4	5	6	7	8
18	1	2	3	4	5	6	7	8
19	1	2	3	4	5	6	7	8
20	1	2	3	4	5	6	7	8
21	1	2	3	4	5	6	7	8
22	1	2	3	4	5	6	7	8
23	1	2	3	4	5	6	7	8
24	1	2	3	4	5	6	7	8
25	1	2	3	4	5	6	7	8
26	1	2	3	4	5	6	7	8
27	1	2	3	4	5	6	7	8
28	1	2	3	4	5	6	7	8
29	1	2	3	4	5	6	7	8
30	1	2	3	4	5	6	7	8
31	1	2	3	4	5	6	7	8
32	1	2	3	4	5	6	7	8
33	1	2	3	4	5	6	7	8
34	1	2	3	4	5	6	7	8
35	1	2	3	4	5	6	7	8
36	1	2	3	4	5	6	7	8
37	1	2	3	4	5	6	7	8
38	1	2	3	4	5	6	7	8
39	1	2	3	4	5	6	7	8
40	1	2	3	4	5	6	7	8
41	1	2	3	4	5	6	7	8
42	1	2	3	4	5	6	7	8
43	1	2	3	4	5	6	7	8
44	1	2	3	4	5	6	7	8
45	1	2	3	4	5	6	7	8
46	1	2	3	4	5	6	7	8
47	1	2	3	4	5	6	7	8
48	1	2	3	4	5	6	7	8
49	1	2	3	4	5	6	7	8
50	1	2	3	4	5	6	7	8
51	1	2	3	4	5	6	7	8
52	1	2	3	4	5	6	7	8
53	1	2	3	4	5	6	7	8
54	1	2	3	4	5	6	7	8
55	1	2	3	4	5	6	7	8
56	1	2	3	4	5	6	7	8
57	1	2	3	4	5			

246	JOINT	59	-1450	-837	12900	ST BRACE
247	JOINT	60	0	1674	12900	ST BRACE
248	JOINT	61	1450	-837	14400	FOT DECK
249	JOINT	62	1000	-837	14400	FOT DECK
250	JOINT	63	-1000	-837	14400	FOT DECK
251	JOINT	64	-1450	-837	14400	FOT DECK
252	JOINT	65	-1000	-837	14400	FOT DECK
253	JOINT	66	-1000	1674	14400	FOT DECK
254	JOINT	67	0	1674	14400	FOT DECK
255	JOINT	68	1000	1674	14400	FOT DECK
256	JOINT	69	1000	-837	14400	FOT DECK
257	JOINT	70	0	1674	13500	BRACE PT
258	JOINT	71	1450	-837	15900	TOP DECK
259	JOINT	72	-1450	-837	15900	TOP DECK
260	JOINT	73	1750	-837	15900	TOP DECK
261	JOINT	74	-1750	-837	15900	TOP DECK
262	JOINT	75	0	1674	15900	TOP DECK
263	JOINT	76	0	1674	14800	BRACE PT
264	JOINT	77	1450	1674	15900	TOP DECK
265	JOINT	78	-1450	1674	15900	TOP DECK
266	JOINT	79	1750	1674	15900	TOP DECK
267	JOINT	80	-1750	1674	15900	TOP DECK
268	JOINT	81	1450	-1337	15900	TOP DECK
269	JOINT	82	-1450	-1337	15900	TOP DECK
270	JOINT	83	1450	2174	15900	TOP DECK
271	JOINT	84	-1450	2174	15900	TOP DECK

[illegible]



POWELL ACQUA STRUCTURE - U.S. NAVY (36-IN). DIAPHR PILING) - C.C. CHEN

LINE	1	2	3	4	5	6	7	8
1	1	1	2	3	5	5	6	6
2	0	5	0	5	0	5	0	5
3	1	5	0	5	0	5	0	5
4	1	5	0	5	0	5	0	5
5	1	5	0	5	0	5	0	5
6	1	5	0	5	0	5	0	5
7	1	5	0	5	0	5	0	5
8	1	5	0	5	0	5	0	5

295	LOAD X	22	34	0.00	1	10.81	1	GLOR	UNIF	AV	0	1
296	LOAD Y	22	34	0.00	53	10.81	57	GLOR	UNIF	AV	0	1
297	LOAD Z	22	34	0.00=	04	10.81=	05	GLOR	UNIF	AV	0	1
298	LOAD X	22	34	10.81	1	10.81	1	GLOR	UNIF	AV	0	1
299	LOAD Y	22	34	10.81	57	10.81	64	GLOR	UNIF	AV	0	1
300	LOAD Z	22	34	10.81=	05	10.81=	05	GLOR	UNIF	AV	0	1
301	LOAD X	22	34	21.63	1	10.81	1	GLOR	UNIF	AV	0	1
302	LOAD Y	22	34	21.63	64	10.81	71	GLOR	UNIF	AV	0	1
303	LOAD Z	22	34	21.63=	05	10.81=	64	GLOR	UNIF	AV	0	1
304	LOAD X	34	40	0.00	1	4.73	1	GLOR	UNIF	AV	0	1
305	LOAD Y	34	40	0.00	73	4.73	77	GLOR	UNIF	AV	0	1
306	LOAD Z	34	40	0.00=	05	4.73=	05	GLOR	UNIF	AV	0	1
307	LOAD X	34	40	4.73	1	4.73	1	GLOR	UNIF	AV	0	1
308	LOAD Y	34	40	4.73	77	4.73	82	GLOR	UNIF	AV	0	1
309	LOAD Z	34	40	4.73=	05	4.73=	06	GLOR	UNIF	AV	0	1
310	LOAD X	34	40	9.45	1	4.73	1	GLOR	UNIF	AV	0	1
311	LOAD Y	34	40	9.45	82	4.73	88	GLOR	UNIF	AV	0	1
312	LOAD Z	34	40	9.45=	06	4.73=	06	GLOR	UNIF	AV	0	1
313	LOAD X	40	49	0.00	1	6.09	1	GLOR	UNIF	AV	0	1
314	LOAD Y	40	49	0.00	88	6.09	96	GLOR	UNIF	AV	0	1
315	LOAD Z	40	49	0.00=	08	6.09=	09	GLOR	UNIF	AV	0	1
316	LOAD X	40	49	6.09	1	6.09	1	GLOR	UNIF	AV	0	1
317	LOAD Y	40	49	6.09	96	6.09	104	GLOR	UNIF	AV	0	1
318	LOAD Z	40	49	6.09=	09	6.09=	09	GLOR	UNIF	AV	0	1
319	LOAD X	40	49	12.17	1	6.09	1	GLOR	UNIF	AV	0	1
320	LOAD Y	40	49	12.17	106	6.09	118	GLOR	UNIF	AV	0	1
321	LOAD Z	40	49	12.17=	09	6.09=	11	GLOR	UNIF	AV	0	1
322	LOAD X	49	55	0.00	1	1.52	1	GLOR	UNIF	AV	0	1
323	LOAD Y	49	55	0.00	118	1.52	121	GLOR	UNIF	AV	0	1
324	LOAD Z	49	55	0.00=	10	1.52=	10	GLOR	UNIF	AV	0	1
325	LOAD X	49	55	1.52	1	1.52	1	GLOR	UNIF	AV	0	1
326	LOAD Y	49	55	1.52	121	1.52	125	GLOR	UNIF	AV	0	1
327	LOAD Z	49	55	1.52=	10	1.52=	10	GLOR	UNIF	AV	0	1
328	LOAD X	49	55	3.04	1	1.52	1	GLOR	UNIF	AV	0	1
329	LOAD Y	49	55	3.04	125	1.52	128	GLOR	UNIF	AV	0	1
330	LOAD Z	49	55	3.04=	10	1.52=	11	GLOR	UNIF	AV	0	1
331	LOAD X	12	24	0.00=	1	10.81=	1	GLOR	UNIF	AV	0	1
332	LOAD Y	12	24	0.00	47	10.81	49	GLOR	UNIF	AV	0	1
333	LOAD Z	12	24	0.00=	01	10.81=	04	GLOR	UNIF	AV	0	1
334	LOAD X	12	24	10.81=	1	10.81=	1	GLOR	UNIF	AV	0	1
335	LOAD Y	12	24	10.81	48	10.81	50	GLOR	UNIF	AV	0	1
336	LOAD Z	12	24	10.81=	04	10.81=	04	GLOR	UNIF	AV	0	1
337	LOAD X	12	24	21.63=	1	10.81=	1	GLOR	UNIF	AV	0	1
338	LOAD Y	12	24	21.63	50	10.81	53	GLOR	UNIF	AV	0	1
339	LOAD Z	12	24	21.63=	04	10.81=	04	GLOR	UNIF	AV	0	1
340	LOAD X	24	36	0.00=	1	10.81=	1	GLOR	UNIF	AV	0	1
341	LOAD Y	24	36	0.00	53	10.81	57	GLOR	UNIF	AV	0	1
342	LOAD Z	24	36	0.00=	04	10.81=	05	GLOR	UNIF	AV	0	1
343	LOAD X	24	36	10.81=	1	10.81=	1	GLOR	UNIF	AV	0	1



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3-PILE ACOR STRUCTURE -- U.S. NAVY (40-IN. DIAMETER PILING) -- C.CHERN

LINE NO. 1 2 3 4 5 6 7 8

344	LOAD Y	24	36	10.81	57	10.81	64	GLOR	UNTF	MV	0	1
345	LOAD Z	24	36	10.81	05	10.81	05	GLOR	UNTF	MV	0	1
346	LOAD X	24	36	21.63	1	10.81	1	GLOR	UNTF	MV	0	1
347	LOAD Y	24	36	21.63	64	10.81	71	GLOR	UNTF	MV	0	1
348	LOAD Z	24	36	21.63	05	10.81	06	GLOR	UNTF	MV	0	1
349	LOAD X	36	41	0.00	1	4.73	1	GLOR	UNTF	MV	0	1
350	LOAD Y	36	41	0.00	73	4.73	77	GLOR	UNTF	MV	0	1
351	LOAD Z	36	41	0.00	05	4.73	05	GLOR	UNTF	MV	0	1
352	LOAD X	36	41	4.73	1	4.73	1	GLOR	UNTF	MV	0	1
353	LOAD Y	36	41	4.73	77	4.73	82	GLOR	UNTF	MV	0	1
354	LOAD Z	36	41	4.73	05	4.73	06	GLOR	UNTF	MV	0	1
355	LOAD X	36	41	9.45	1	4.73	1	GLOR	UNTF	MV	0	1
356	LOAD Y	36	41	9.45	82	4.73	88	GLOR	UNTF	MV	0	1
357	LOAD Z	36	41	9.45	06	4.73	06	GLOR	UNTF	MV	0	1
358	LOAD X	41	51	0.00	1	6.09	1	GLOR	UNTF	MV	0	1
359	LOAD Y	41	51	0.00	88	6.09	96	GLOR	UNTF	MV	0	1
360	LOAD Z	41	51	0.00	08	6.09	09	GLOR	UNTF	MV	0	1
361	LOAD X	41	51	6.09	1	6.09	1	GLOR	UNTF	MV	0	1
362	LOAD Y	41	51	6.09	96	6.09	106	GLOR	UNTF	MV	0	1
363	LOAD Z	41	51	6.09	09	6.09	09	GLOR	UNTF	MV	0	1
364	LOAD X	41	51	12.17	1	6.09	1	GLOR	UNTF	MV	0	1
365	LOAD Y	41	51	12.17	106	6.09	118	GLOR	UNTF	MV	0	1
366	LOAD Z	41	51	12.17	09	6.09	11	GLOR	UNTF	MV	0	1
367	LOAD X	51	56	0.00	1	1.52	1	GLOR	UNTF	MV	0	1
368	LOAD Y	51	56	0.00	118	1.52	121	GLOR	UNTF	MV	0	1
369	LOAD Z	51	56	0.00	10	1.52	10	GLOR	UNTF	MV	0	1
370	LOAD X	51	56	1.52	1	1.52	1	GLOR	UNTF	MV	0	1
371	LOAD Y	51	56	1.52	121	1.52	125	GLOR	UNTF	MV	0	1
372	LOAD Z	51	56	1.52	10	1.52	10	GLOR	UNTF	MV	0	1
373	LOAD X	51	56	1.04	1	1.52	1	GLOR	UNTF	MV	0	1
374	LOAD Y	51	56	3.04	125	1.52	128	GLOR	UNTF	MV	0	1
375	LOAD Z	51	56	3.04	10	1.52	11	GLOR	UNTF	MV	0	1
376	LOAD X	14	26	0.00	50	10.81	51	GLOR	UNTF	MV	0	1
377	LOAD Y	14	26	0.00	08	10.81	08	GLOR	UNTF	MV	0	1
378	LOAD Z	14	26	10.81	51	10.81	53	GLOR	UNTF	MV	0	1
379	LOAD X	14	26	10.81	08	10.81	09	GLOR	UNTF	MV	0	1
380	LOAD Y	14	26	21.63	53	10.81	56	GLOR	UNTF	MV	0	1
381	LOAD Z	14	26	21.63	09	10.81	09	GLOR	UNTF	MV	0	1
382	LOAD X	26	38	0.00	55	10.81	59	GLOR	UNTF	MV	0	1
383	LOAD Y	26	38	0.00	11	10.81	11	GLOR	UNTF	MV	0	1
384	LOAD Z	26	38	10.81	59	10.81	61	GLOR	UNTF	MV	0	1
385	LOAD X	26	38	10.81	11	10.81	12	GLOR	UNTF	MV	0	1
386	LOAD Y	26	38	21.72	61	10.81	70	GLOR	UNTF	MV	0	1
387	LOAD Z	26	38	21.72	12	10.81	13	GLOR	UNTF	MV	0	1
388	LOAD X	38	42	0.00	65	5.01	69	GLOR	UNTF	MV	0	1
389	LOAD Y	38	42	0.00	25	5.01	27	GLOR	UNTF	MV	0	1
390	LOAD Z	38	42	5.01	69	5.01	73	GLOR	UNTF	MV	0	1
391	LOAD X	38	42	5.01	27	5.01	29	GLOR	UNTF	MV	0	1
392	LOAD Y	38	42	10.02	73	5.01	78	GLOR	UNTF	MV	0	1



STEP 1 TOP OF DATA

TABLE ACME STRUCTURE -- U.S. NAVY (56-IN. DIAMETER PILING) -- C.CHEMN

LINE NO. 1 2 3 4 5 6 7 8

393	LOAD Z	38	42	10.02	20	5.01	31	GLOR UNIF	MV 0 1
394	LOAD Y	42	53	0.00	65	7.09	71	GLOR UNIF	MV 0 1
395	LOAD Z	42	53	0.00	41	7.09	45	GLOR UNIF	MV 0 1
396	LOAD Y	42	53	7.09	71	7.09	79	GLOR UNIF	MV 0 1
397	LOAD Z	42	53	7.09	45	7.09	49	GLOR UNIF	MV 0 1
398	LOAD Y	42	53	14.17	79	7.09	84	GLOR UNIF	MV 0 1
399	LOAD Z	42	53	14.17	49	7.09	54	GLOR UNIF	MV 0 1
400	LOAD Y	53	57	0.00	120	1.52	123	GLOR UNIF	MV 0 1
401	LOAD Z	53	57	0.00	20	1.52	20	GLOR UNIF	MV 0 1
402	LOAD Y	53	57	1.52	123	1.52	126	GLOR UNIF	MV 0 1
403	LOAD Z	53	57	1.52	20	1.52	21	GLOR UNIF	MV 0 1
404	LOAD Y	53	57	3.04	126	1.52	129	GLOR UNIF	MV 0 1
405	LOAD Z	53	57	3.04	21	1.52	21	GLOR UNIF	MV 0 1
406	LOAD Y	10	11	0.00	21	9.67	21	GLOR UNIF	MV 0 1
407	LOAD Z	10	11	9.67	21	9.67	21	GLOR UNIF	MV 0 1
408	LOAD Y	10	11	19.35	21	9.67	21	GLOR UNIF	MV 0 1
409	LOAD Z	11	12	0.00	21	9.67	21	GLOR UNIF	MV 0 1
410	LOAD Y	11	12	9.67	21	9.67	21	GLOR UNIF	MV 0 1
411	LOAD Z	11	12	19.35	21	9.67	21	GLOR UNIF	MV 0 1
412	LOAD Y	12	13	0.00	09	9.67	09	GLOR UNIF	MV 0 1
413	LOAD Z	12	13	0.00	05	9.67	15	GLOR UNIF	MV 0 1
414	LOAD Y	12	13	9.67	09	9.67	10	GLOR UNIF	MV 0 1
415	LOAD Z	12	13	9.67	05	9.67	06	GLOR UNIF	MV 0 1
416	LOAD Y	12	13	19.35	10	9.67	10	GLOR UNIF	MV 0 1
417	LOAD Z	12	13	19.35	06	9.67	06	GLOR UNIF	MV 0 1
418	LOAD Y	13	14	0.00	10	9.67	10	GLOR UNIF	MV 0 1
419	LOAD Z	13	14	0.00	06	9.67	06	GLOR UNIF	MV 0 1
420	LOAD Y	13	14	9.67	10	9.67	10	GLOR UNIF	MV 0 1
421	LOAD Z	13	14	9.67	06	9.67	06	GLOR UNIF	MV 0 1
422	LOAD Y	13	14	19.35	10	9.67	10	GLOR UNIF	MV 0 1
423	LOAD Z	13	14	19.35	06	9.67	06	GLOR UNIF	MV 0 1
424	LOAD Y	14	15	0.00	10	9.67	10	GLOR UNIF	MV 0 1
425	LOAD Z	14	15	0.00	06	9.67	06	GLOR UNIF	MV 0 1
426	LOAD Y	14	15	9.67	10	9.67	10	GLOR UNIF	MV 0 1
427	LOAD Z	14	15	9.67	06	9.67	06	GLOR UNIF	MV 0 1
428	LOAD Y	14	15	19.35	10	9.67	10	GLOR UNIF	MV 0 1
429	LOAD Z	14	15	19.35	06	9.67	06	GLOR UNIF	MV 0 1
430	LOAD Y	15	16	0.00	10	9.67	10	GLOR UNIF	MV 0 1
431	LOAD Z	15	16	0.00	06	9.67	06	GLOR UNIF	MV 0 1
432	LOAD Y	15	16	9.67	10	9.67	10	GLOR UNIF	MV 0 1
433	LOAD Z	15	16	9.67	06	9.67	06	GLOR UNIF	MV 0 1
434	LOAD Y	15	16	19.35	09	9.67	09	GLOR UNIF	MV 0 1
435	LOAD Z	15	16	19.35	05	9.67	05	GLOR UNIF	MV 0 1
436	LOAD Y	11	13	0.00	07	9.67	07	GLOR UNIF	MV 0 1
437	LOAD Z	11	13	0.00	04	9.67	04	GLOR UNIF	MV 0 1
438	LOAD Y	11	13	9.67	07	9.67	08	GLOR UNIF	MV 0 1
439	LOAD Z	11	13	9.67	04	9.67	04	GLOR UNIF	MV 0 1
440	LOAD Y	11	13	19.35	08	9.67	08	GLOR UNIF	MV 0 1
441	LOAD Z	11	13	19.35	04	9.67	04	GLOR UNIF	MV 0 1



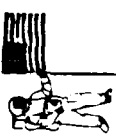
STAR INPUT DATA

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1-PILE ACMR STRUCTURE -- U.S. NAVY (16-IN. DIAMETER PILING) -- C. CHERN

LINE NO. 1...5...11...15...19...23...27...31...35...39...43...47...51...55...59...63...67...71...75...79...83...87...91...95...99

442	LOAD Y	13	15	0.00	1A	9.67	1A	GLOR UNITF	MV 0 1
443	LOAD Y	13	15	9.67	1A	9.67	1A	GLOR UNITF	MV 0 1
444	LOAD Y	13	15	19.33	1A	9.67	1A	GLOR UNITF	MV 0 1
445	LOAD X	15	11	0.00	0A	9.67	0A	GLOR UNITF	MV 0 1
446	LOAD Y	15	11	0.00	0A	9.67	0A	GLOR UNITF	MV 0 1
447	LOAD X	15	11	9.67	0A	9.67	0A	GLOR UNITF	MV 0 1
448	LOAD Y	15	11	9.67	0A	9.67	0A	GLOR UNITF	MV 0 1
449	LOAD X	15	11	19.33	0A	9.67	0A	GLOR UNITF	MV 0 1
450	LOAD Y	15	11	19.33	0A	9.67	0A	GLOR UNITF	MV 0 1
451	LOAD Y	22	23	0.00	2A	8.13	2A	GLOR UNITF	MV 0 1
452	LOAD Y	22	23	8.13	2A	8.13	2A	GLOR UNITF	MV 0 1
453	LOAD Y	22	23	16.25	2A	8.13	2A	GLOR UNITF	MV 0 1
454	LOAD Y	23	24	0.00	2A	8.13	2A	GLOR UNITF	MV 0 1
455	LOAD Y	23	24	8.13	2A	8.13	2A	GLOR UNITF	MV 0 1
456	LOAD Y	23	24	16.25	2A	8.13	2A	GLOR UNITF	MV 0 1
457	LOAD Y	24	25	0.00	10	8.13	11	GLOR UNITF	MV 0 1
458	LOAD Y	24	25	0.00	0A	8.13	0A	GLOR UNITF	MV 0 1
459	LOAD X	24	25	8.13	11	8.13	11	GLOR UNITF	MV 0 1
460	LOAD Y	24	25	8.13	0A	8.13	0A	GLOR UNITF	MV 0 1
461	LOAD Y	24	25	16.25	11	8.13	11	GLOR UNITF	MV 0 1
462	LOAD Y	24	25	16.25	0A	8.13	0A	GLOR UNITF	MV 0 1
463	LOAD X	25	26	0.00	11	8.13	11	GLOR UNITF	MV 0 1
464	LOAD Y	25	26	0.00	0A	8.13	0A	GLOR UNITF	MV 0 1
465	LOAD X	25	26	8.13	11	8.13	11	GLOR UNITF	MV 0 1
466	LOAD Y	25	26	8.13	0A	8.13	0A	GLOR UNITF	MV 0 1
467	LOAD X	25	26	16.25	11	8.13	11	GLOR UNITF	MV 0 1
468	LOAD Y	25	26	16.25	0A	8.13	0A	GLOR UNITF	MV 0 1
469	LOAD X	26	27	0.00	11	8.13	11	GLOR UNITF	MV 0 1
470	LOAD Y	26	27	0.00	0A	8.13	0A	GLOR UNITF	MV 0 1
471	LOAD X	26	27	8.13	11	8.13	11	GLOR UNITF	MV 0 1
472	LOAD Y	26	27	8.13	0A	8.13	0A	GLOR UNITF	MV 0 1
473	LOAD X	26	27	16.25	11	8.13	11	GLOR UNITF	MV 0 1
474	LOAD Y	26	27	16.25	0A	8.13	0A	GLOR UNITF	MV 0 1
475	LOAD X	27	22	0.00	11	8.13	11	GLOR UNITF	MV 0 1
476	LOAD Y	27	22	0.00	0A	8.13	0A	GLOR UNITF	MV 0 1
477	LOAD X	27	22	8.13	11	8.13	11	GLOR UNITF	MV 0 1
478	LOAD Y	27	22	8.13	0A	8.13	0A	GLOR UNITF	MV 0 1
479	LOAD X	27	22	16.25	11	8.13	11	GLOR UNITF	MV 0 1
480	LOAD Y	27	22	16.25	0A	8.13	0A	GLOR UNITF	MV 0 1
481	LOAD X	23	25	0.00	0A	8.13	0A	GLOR UNITF	MV 0 1
482	LOAD Y	23	25	0.00	0A	8.13	0A	GLOR UNITF	MV 0 1
483	LOAD X	23	25	8.13	0A	8.13	0A	GLOR UNITF	MV 0 1
484	LOAD Y	23	25	8.13	0A	8.13	0A	GLOR UNITF	MV 0 1
485	LOAD X	23	25	16.25	0A	8.13	0A	GLOR UNITF	MV 0 1
486	LOAD Y	23	25	16.25	0A	8.13	0A	GLOR UNITF	MV 0 1
487	LOAD Y	25	27	0.00	20	8.13	20	GLOR UNITF	MV 0 1
488	LOAD Y	25	27	8.13	20	8.13	20	GLOR UNITF	MV 0 1
489	LOAD Y	25	27	16.25	20	8.13	20	GLOR UNITF	MV 0 1
490	LOAD X	27	23	0.00	0A	8.13	0A	GLOR UNITF	MV 0 1



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3-PILE ACHR STRUCTURE -- U.S. NAVY (36-IN. DIA-FTW PILING) -- C.C.M.H.

LINE NO. 1 2 3 4 5 6 7 8

491	LOAD	Y	27	23	0.00	05	8.13	05	GLOR	UNIF	AV	0	1
492	LOAD	X	27	23	8.13	05	8.13	05	GLOR	UNIF	AV	0	1
493	LOAD	Y	27	23	8.13	05	8.13	05	GLOR	UNIF	AV	0	1
494	LOAD	X	27	23	16.25	05	8.13	05	GLOR	UNIF	AV	0	1
495	LOAD	Y	27	23	16.25	05	8.13	05	GLOR	UNIF	AV	0	1
496	LOAD	Y	34	35	0.00	23	6.59	23	GLOR	UNIF	AV	0	1
497	LOAD	Y	34	35	6.59	23	6.59	23	GLOR	UNIF	AV	0	1
498	LOAD	Y	34	35	13.18	23	6.59	23	GLOR	UNIF	AV	0	1
499	LOAD	Y	35	36	0.00	23	6.59	23	GLOR	UNIF	AV	0	1
500	LOAD	Y	35	36	6.59	23	6.59	23	GLOR	UNIF	AV	0	1
501	LOAD	Y	35	36	13.18	23	6.59	23	GLOR	UNIF	AV	0	1
502	LOAD	X	36	37	0.00	10	6.59	10	GLOR	UNIF	AV	0	1
503	LOAD	X	36	37	0.00	10	6.59	10	GLOR	UNIF	AV	0	1
504	LOAD	X	36	37	6.59	10	6.59	10	GLOR	UNIF	AV	0	1
505	LOAD	X	36	37	6.59	10	6.59	10	GLOR	UNIF	AV	0	1
506	LOAD	X	36	37	13.18	10	6.59	10	GLOR	UNIF	AV	0	1
507	LOAD	Y	36	37	13.18	06	6.59	06	GLOR	UNIF	AV	0	1
508	LOAD	X	37	38	0.00	07	10.07	07	GLOR	UNIF	AV	0	1
509	LOAD	Y	37	38	0.00	03	10.07	03	GLOR	UNIF	AV	0	1
510	LOAD	X	37	38	10.07	07	10.07	07	GLOR	UNIF	AV	0	1
511	LOAD	Y	37	38	10.07	03	10.07	03	GLOR	UNIF	AV	0	1
512	LOAD	X	37	38	20.15	03	10.07	07	GLOR	UNIF	AV	0	1
513	LOAD	Y	37	38	20.15	02	10.07	02	GLOR	UNIF	AV	0	1
514	LOAD	X	38	39	0.00	07	10.07	07	GLOR	UNIF	AV	0	1
515	LOAD	Y	38	39	0.00	02	10.07	03	GLOR	UNIF	AV	0	1
516	LOAD	X	38	39	10.07	07	10.07	07	GLOR	UNIF	AV	0	1
517	LOAD	Y	38	39	10.07	03	10.07	03	GLOR	UNIF	AV	0	1
518	LOAD	X	38	39	20.15	07	10.07	07	GLOR	UNIF	AV	0	1
519	LOAD	Y	38	39	20.15	03	10.07	03	GLOR	UNIF	AV	0	1
520	LOAD	X	39	34	0.00	10	6.59	10	GLOR	UNIF	AV	0	1
521	LOAD	Y	39	34	0.00	06	6.59	06	GLOR	UNIF	AV	0	1
522	LOAD	Y	39	34	6.59	10	6.59	10	GLOR	UNIF	AV	0	1
523	LOAD	Y	39	34	6.59	06	6.59	06	GLOR	UNIF	AV	0	1
524	LOAD	X	39	34	13.18	10	6.59	10	GLOR	UNIF	AV	0	1
525	LOAD	Y	39	34	13.18	06	6.59	06	GLOR	UNIF	AV	0	1
526	LOAD	Y	35	37	0.00	10	6.59	10	GLOR	UNIF	AV	0	1
527	LOAD	Y	35	37	0.00	06	6.59	06	GLOR	UNIF	AV	0	1
528	LOAD	X	35	37	6.59	10	6.59	10	GLOR	UNIF	AV	0	1
529	LOAD	Y	35	37	6.59	06	6.59	06	GLOR	UNIF	AV	0	1
530	LOAD	X	35	37	13.18	10	6.59	10	GLOR	UNIF	AV	0	1
531	LOAD	Y	35	37	13.18	06	6.59	06	GLOR	UNIF	AV	0	1
532	LOAD	Y	37	39	0.00	24	6.59	24	GLOR	UNIF	AV	0	1
533	LOAD	Y	37	39	6.59	24	6.59	24	GLOR	UNIF	AV	0	1
534	LOAD	Y	37	39	13.17	24	6.59	24	GLOR	UNIF	AV	0	1
535	LOAD	X	39	35	0.00	10	6.59	10	GLOR	UNIF	AV	0	1
536	LOAD	Y	39	35	0.00	06	6.59	06	GLOR	UNIF	AV	0	1
537	LOAD	Y	39	35	6.59	10	6.59	10	GLOR	UNIF	AV	0	1
538	LOAD	Y	39	35	6.59	06	6.59	06	GLOR	UNIF	AV	0	1
539	LOAD	X	39	35	13.18	10	6.59	10	GLOR	UNIF	AV	0	1



STATUS INPUT DATA

SEPTIC ACID STRUCTURE -- U.S. NAVY (46-14" DIAMETER PILING) -- C.CHERN

LINE NO. 1 2 3 4 5 6 7 8

589	LOAD X	11	22	13.44	1	13.44	1	GLOR UNIF	AV 0 1
590	LOAD Y	11	22	13.44	10	13.44	20	GLOR UNIF	AV 0 1
591	LOAD Z	11	22	13.44	1	13.44	1	GLOR UNIF	AV 0 1
592	LOAD X	11	22	26.88	1	13.44	1	GLOR UNIF	AV 0 1
593	LOAD Y	11	22	26.88	20	13.44	21	GLOR UNIF	AV 0 1
594	LOAD Z	11	22	26.88	1	13.44	1	GLOR UNIF	AV 0 1
595	LOAD X	11	24	0.00	1	13.44	1	GLOR UNIF	AV 0 1
596	LOAD Y	11	24	0.00	19	13.44	19	GLOR UNIF	AV 0 1
597	LOAD Z	11	24	0.00	1	13.44	1	GLOR UNIF	AV 0 1
598	LOAD X	11	24	13.44	1	13.44	1	GLOR UNIF	AV 0 1
599	LOAD Y	11	24	13.44	19	13.44	20	GLOR UNIF	AV 0 1
600	LOAD Z	11	24	13.44	1	13.44	1	GLOR UNIF	AV 0 1
601	LOAD X	11	24	26.88	1	13.44	1	GLOR UNIF	AV 0 1
602	LOAD Y	11	24	26.88	20	13.44	21	GLOR UNIF	AV 0 1
603	LOAD Z	11	24	26.88	1	13.44	1	GLOR UNIF	AV 0 1
604	LOAD X	13	24	0.00	03	13.44	03	GLOR UNIF	AV 0 1
605	LOAD Y	13	24	0.00	14	13.44	14	GLOR UNIF	AV 0 1
606	LOAD Z	13	24	0.00	09	13.44	09	GLOR UNIF	AV 0 1
607	LOAD X	13	24	13.44	03	13.44	03	GLOR UNIF	AV 0 1
608	LOAD Y	13	24	13.44	14	13.44	14	GLOR UNIF	AV 0 1
609	LOAD Z	13	24	13.44	09	13.44	09	GLOR UNIF	AV 0 1
610	LOAD X	13	24	26.88	03	13.44	03	GLOR UNIF	AV 0 1
611	LOAD Y	13	24	26.88	14	13.44	15	GLOR UNIF	AV 0 1
612	LOAD Z	13	24	26.88	09	13.44	09	GLOR UNIF	AV 0 1
613	LOAD X	13	26	0.00	04	13.44	04	GLOR UNIF	AV 0 1
614	LOAD Y	13	26	0.00	16	13.44	16	GLOR UNIF	AV 0 1
615	LOAD Z	13	26	0.00	08	13.44	08	GLOR UNIF	AV 0 1
616	LOAD X	13	26	13.44	04	13.44	04	GLOR UNIF	AV 0 1
617	LOAD Y	13	26	13.44	16	13.44	17	GLOR UNIF	AV 0 1
618	LOAD Z	13	26	13.44	08	13.44	08	GLOR UNIF	AV 0 1
619	LOAD X	13	26	26.88	04	13.44	04	GLOR UNIF	AV 0 1
620	LOAD Y	13	26	26.88	17	13.44	17	GLOR UNIF	AV 0 1
621	LOAD Z	13	26	26.88	08	13.44	09	GLOR UNIF	AV 0 1
622	LOAD X	15	26	0.00	04	13.44	04	GLOR UNIF	AV 0 1
623	LOAD Y	15	26	0.00	16	13.44	16	GLOR UNIF	AV 0 1
624	LOAD Z	15	26	0.00	08	13.44	08	GLOR UNIF	AV 0 1
625	LOAD X	15	26	13.44	04	13.44	04	GLOR UNIF	AV 0 1
626	LOAD Y	15	26	13.44	16	13.44	17	GLOR UNIF	AV 0 1
627	LOAD Z	15	26	13.44	08	13.44	08	GLOR UNIF	AV 0 1
628	LOAD X	15	26	26.88	04	13.44	04	GLOR UNIF	AV 0 1
629	LOAD Y	15	26	26.88	17	13.44	17	GLOR UNIF	AV 0 1
630	LOAD Z	15	26	26.88	08	13.44	09	GLOR UNIF	AV 0 1
631	LOAD X	15	22	0.00	03	13.44	03	GLOR UNIF	AV 0 1
632	LOAD Y	15	22	0.00	14	13.44	14	GLOR UNIF	AV 0 1
633	LOAD Z	15	22	0.00	09	13.44	09	GLOR UNIF	AV 0 1
634	LOAD X	15	22	13.44	03	13.44	03	GLOR UNIF	AV 0 1
635	LOAD Y	15	22	13.44	14	13.44	14	GLOR UNIF	AV 0 1
636	LOAD Z	15	22	13.44	09	13.44	09	GLOR UNIF	AV 0 1
637	LOAD X	15	22	26.88	03	13.44	03	GLOR UNIF	AV 0 1



STAKE TYPOT DATA

3-PILE ACNR STRUCTURE -- U.S. NAV (36-IN. DIAMETER PILING) -- C. CHERN

LINE NO. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86

638	LOAD Y	15	22	26.88	14	13.44	15	GLOR	UNTF	MV	0	1
639	LOAD X	15	22	26.88	09	13.44	09	GLOR	UNTF	MV	0	1
640	LOAD Z	22	34	0.00	1	18.20	1	GLOR	UNTF	MV	0	1
641	LOAD Y	22	36	0.00	27	18.20	29	GLOR	UNTF	MV	0	1
642	LOAD Z	22	36	0.00	1	18.20	1	GLOR	UNTF	MV	0	1
643	LOAD X	22	36	18.20	1	18.20	1	GLOR	UNTF	MV	0	1
644	LOAD Z	22	36	18.20	29	18.20	32	GLOR	UNTF	MV	0	1
645	LOAD Y	22	36	18.20	1	18.20	1	GLOR	UNTF	MV	0	1
646	LOAD X	22	36	36.39	1	18.20	1	GLOR	UNTF	MV	0	1
647	LOAD Y	22	36	36.39	32	18.20	36	GLOR	UNTF	MV	0	1
648	LOAD Z	22	36	36.39	1	18.20	1	GLOR	UNTF	MV	0	1
649	LOAD X	24	38	0.00	08	20.96	09	GLOR	UNTF	MV	0	1
650	LOAD Y	24	38	0.00	11	20.96	13	GLOR	UNTF	MV	0	1
651	LOAD Z	24	38	0.00	10	20.96	12	GLOR	UNTF	MV	0	1
652	LOAD X	24	38	20.96	09	20.96	10	GLOR	UNTF	MV	0	1
653	LOAD Y	24	38	20.96	13	20.96	14	GLOR	UNTF	MV	0	1
654	LOAD Z	24	38	20.96	12	20.96	13	GLOR	UNTF	MV	0	1
655	LOAD X	24	38	41.93	10	20.96	11	GLOR	UNTF	MV	0	1
656	LOAD Y	24	38	41.93	14	20.96	15	GLOR	UNTF	MV	0	1
657	LOAD Z	24	38	41.93	13	20.96	14	GLOR	UNTF	MV	0	1
658	LOAD X	26	34	0.00	08	18.20	08	GLOR	UNTF	MV	0	1
659	LOAD Y	26	34	0.00	14	18.20	15	GLOR	UNTF	MV	0	1
660	LOAD Z	26	34	0.00	12	18.20	13	GLOR	UNTF	MV	0	1
661	LOAD X	26	34	18.20	08	18.20	09	GLOR	UNTF	MV	0	1
662	LOAD Y	26	34	18.20	15	18.20	14	GLOR	UNTF	MV	0	1
663	LOAD Z	26	34	18.20	13	18.20	14	GLOR	UNTF	MV	0	1
664	LOAD X	26	34	36.39	09	18.20	09	GLOR	UNTF	MV	0	1
665	LOAD Y	26	34	36.39	16	18.20	17	GLOR	UNTF	MV	0	1
666	LOAD Z	26	34	36.39	14	18.20	15	GLOR	UNTF	MV	0	1
667	LOAD X	36	49	0.00	1	11.86	02	GLOR	UNTF	MV	0	1
668	LOAD Y	36	49	0.00	36	11.86	40	GLOR	UNTF	MV	0	1
669	LOAD Z	36	49	0.00	1	11.86	1	GLOR	UNTF	MV	0	1
670	LOAD X	36	49	11.86	02	11.86	02	GLOR	UNTF	MV	0	1
671	LOAD Y	36	49	11.86	40	11.86	44	GLOR	UNTF	MV	0	1
672	LOAD Z	36	49	11.86	1	11.86	02	GLOR	UNTF	MV	0	1
673	LOAD X	36	49	23.72	02	11.86	50	GLOR	UNTF	MV	0	1
674	LOAD Y	36	49	23.72	40	11.86	02	GLOR	UNTF	MV	0	1
675	LOAD Z	36	49	23.72	02	11.86	02	GLOR	UNTF	MV	0	1
676	LOAD X	36	49	35.54	02	11.86	02	GLOR	UNTF	MV	0	1
677	LOAD Y	36	49	35.54	50	11.86	54	GLOR	UNTF	MV	0	1
678	LOAD Z	36	49	35.54	02	11.86	02	GLOR	UNTF	MV	0	1
679	LOAD X	38	51	0.00	08	13.93	09	GLOR	UNTF	MV	0	1
680	LOAD Y	38	51	0.00	15	13.93	17	GLOR	UNTF	MV	0	1
681	LOAD Z	38	51	0.00	16	13.93	14	GLOR	UNTF	MV	0	1
682	LOAD X	38	51	13.93	09	13.93	10	GLOR	UNTF	MV	0	1
683	LOAD Y	38	51	13.93	17	13.93	19	GLOR	UNTF	MV	0	1
684	LOAD Z	38	51	13.93	14	13.93	21	GLOR	UNTF	MV	0	1
685	LOAD X	38	51	27.86	10	13.93	11	GLOR	UNTF	MV	0	1
686	LOAD Y	38	51	27.86	19	13.93	21	GLOR	UNTF	MV	0	1



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PILE ACME STRUCTURE -- U.S. NAVY (34-IN. DIAMETER PILING) -- C. CHERN

LINE NO. 1 2 3 4 5 6 7 8

736	LOAD V	70	67	1.33	238	.22	230	GLOR UNIF	AV 0 1
737	LOAD V	70	67	1.56	259	.22	241	GLOR UNIF	AV 0 1
738	LOAD V	70	67	1.78	241	.22		GLOR UNIF	AV 0 1
739	LOAD V	58	59	0.00	71	9.67	71	GLOR UNIF	AV 0 1
740	LOAD V	58	59	9.67	71	9.67	71	GLOR UNIF	AV 0 1
741	LOAD V	58	59	19.33	71	9.67	71	GLOR UNIF	AV 0 1
742	LOAD X	59	60	0.00	31	9.67	32	GLOR UNIF	AV 0 1
743	LOAD V	59	60	0.00	18	9.67	18	GLOR UNIF	AV 0 1
744	LOAD X	59	60	9.67	32	9.67	32	GLOR UNIF	AV 0 1
745	LOAD V	59	60	9.67	18	9.67	18	GLOR UNIF	AV 0 1
746	LOAD X	59	60	19.33	32	9.67	31	GLOR UNIF	AV 0 1
747	LOAD V	59	60	19.33	18	9.67	18	GLOR UNIF	AV 0 1
748	LOAD X	60	58	0.00	31	9.67	32	GLOR UNIF	AV 0 1
749	LOAD X	60	58	0.00	18	9.67	18	GLOR UNIF	AV 0 1
750	LOAD X	60	58	9.67	32	9.67	32	GLOR UNIF	AV 0 1
751	LOAD V	60	58	9.67	18	9.67	18	GLOR UNIF	AV 0 1
752	LOAD X	60	58	19.33	32	9.67	31	GLOR UNIF	AV 0 1
753	LOAD V	60	58	19.33	18	9.67	18	GLOR UNIF	AV 0 1
754	LOAD V	59	61	0.00	71	9.13	74	GLOR UNIF	AV 0 1
755	LOAD V	59	61	9.13	74	9.13	66	GLOR UNIF	AV 0 1
756	LOAD V	59	61	18.25	66	9.13	95	GLOR UNIF	AV 0 1
757	LOAD X	60	64	0.00	24	8.41	27	GLOR UNIF	AV 0 1
758	LOAD V	60	64	0.00	29	8.41	33	GLOR UNIF	AV 0 1
759	LOAD Z	60	64	0.00	25	8.41	28	GLOR UNIF	AV 0 1
760	LOAD X	60	64	8.41	27	8.41	30	GLOR UNIF	AV 0 1
761	LOAD V	60	64	8.41	33	8.41	36	GLOR UNIF	AV 0 1
762	LOAD Z	60	64	8.41	28	8.41	31	GLOR UNIF	AV 0 1
763	LOAD X	60	64	16.81	30	8.41	35	GLOR UNIF	AV 0 1
764	LOAD V	60	64	16.81	36	8.41	39	GLOR UNIF	AV 0 1
765	LOAD Z	60	64	16.81	31	8.41	34	GLOR UNIF	AV 0 1
766	LOAD X	58	67	0.00	24	7.07	27	GLOR UNIF	AV 0 1
767	LOAD V	58	67	0.00	29	7.07	32	GLOR UNIF	AV 0 1
768	LOAD Z	58	67	0.00	25	7.07	28	GLOR UNIF	AV 0 1
769	LOAD X	58	67	7.07	27	7.07	29	GLOR UNIF	AV 0 1
770	LOAD V	58	67	7.07	32	7.07	35	GLOR UNIF	AV 0 1
771	LOAD Z	58	67	7.07	28	7.07	30	GLOR UNIF	AV 0 1
772	LOAD X	58	67	14.14	29	7.07	31	GLOR UNIF	AV 0 1
773	LOAD V	58	67	14.14	35	7.07	37	GLOR UNIF	AV 0 1
774	LOAD Z	58	67	14.14	30	7.07	32	GLOR UNIF	AV 0 1
775	LOAD V	70	66	0.00	42	.33	45	GLOR UNIF	AV 0 1
776	LOAD V	70	66	.33	45	.33	45	GLOR UNIF	AV 0 1
777	LOAD V	70	66	.00	43	.33	43	GLOR UNIF	AV 0 1
778	LOAD V	70	66	1.00	45	.33	43	GLOR UNIF	AV 0 1
779	LOAD V	70	66	1.33	45	.33	43	GLOR UNIF	AV 0 1
780	LOAD V	70	66	1.66	45	.33	44	GLOR UNIF	AV 0 1
781	LOAD V	70	66	1.99	40	.33	40	GLOR UNIF	AV 0 1
782	LOAD V	70	66	2.33	40	.33	40	GLOR UNIF	AV 0 1
783	LOAD V	70	66	2.66	40	.33	43	GLOR UNIF	AV 0 1
784	LOAD V	70	66	0.00	42	.33	45	GLOR UNIF	AV 0 1



3-PTILE ACOR STRUCTURE -- U.S. NAVY (3A-1N, DIAPETER PTING) -- C,CHERN

LINE NO.	1	2	3	4	5	6	7	8
785	LOAD Y	70	68	.33	43	.33	43	GLOR UNIF
786	LOAD Y	70	68	.33	43	.33	43	GLOR UNIF
787	LOAD Y	70	68	1.00	43	.33	43	GLOR UNIF
788	LOAD Y	70	68	1.33	43	.33	43	GLOR UNIF
789	LOAD Y	70	68	1.66	43	.33	43	GLOR UNIF
790	LOAD Y	70	68	1.99	44	.33	44	GLOR UNIF
791	LOAD Y	70	68	2.33	44	.33	44	GLOR UNIF
792	LOAD Y	70	68	2.66	44	.33	44	GLOR UNIF
793	LOAD Y	70	68	3.00	44	.33	44	GLOR UNIF
794	LOAD Y	70	68	3.33	44	.33	44	GLOR UNIF
795	LOAD Y	70	68	3.66	44	.33	44	GLOR UNIF
796	LOAD Y	70	68	4.00	44	.33	44	GLOR UNIF
797	LOAD Y	70	68	4.33	44	.33	44	GLOR UNIF
798	LOAD Y	70	68	4.66	44	.33	44	GLOR UNIF
799	LOAD Y	70	68	5.00	44	.33	44	GLOR UNIF
800	LOAD Y	70	68	5.33	44	.33	44	GLOR UNIF
801	LOAD Y	70	68	5.66	44	.33	44	GLOR UNIF
802	LOAD Y	70	68	6.00	44	.33	44	GLOR UNIF
803	LOAD Y	70	68	6.33	44	.33	44	GLOR UNIF
804	LOAD Y	70	68	6.66	44	.33	44	GLOR UNIF
805	LOAD Y	70	68	7.00	44	.33	44	GLOR UNIF
806	LOAD Y	70	68	7.33	44	.33	44	GLOR UNIF
807	LOAD Y	70	68	7.66	44	.33	44	GLOR UNIF
808	LOAD Y	70	68	8.00	44	.33	44	GLOR UNIF
809	LOAD Y	70	68	8.33	44	.33	44	GLOR UNIF
810	LOAD Y	70	68	8.66	44	.33	44	GLOR UNIF
811	LOAD Y	70	68	9.00	44	.33	44	GLOR UNIF
812	LOAD Y	70	68	9.33	44	.33	44	GLOR UNIF
813	LOAD Y	70	68	9.66	44	.33	44	GLOR UNIF
814	LOAD Y	70	68	10.00	44	.33	44	GLOR UNIF
815	LOAD Y	70	68	10.33	44	.33	44	GLOR UNIF
816	LOAD Y	70	68	10.66	44	.33	44	GLOR UNIF
817	LOAD Y	70	68	11.00	44	.33	44	GLOR UNIF
818	LOAD Y	70	68	11.33	44	.33	44	GLOR UNIF
819	LOAD Y	70	68	11.66	44	.33	44	GLOR UNIF
820	LOAD Y	70	68	12.00	44	.33	44	GLOR UNIF
821	LOAD Y	70	68	12.33	44	.33	44	GLOR UNIF
822	LOAD Y	70	68	12.66	44	.33	44	GLOR UNIF
823	LOAD Y	70	68	13.00	44	.33	44	GLOR UNIF
824	LOAD Y	70	68	13.33	44	.33	44	GLOR UNIF
825	LOAD Y	70	68	13.66	44	.33	44	GLOR UNIF
826	LOAD Y	70	68	14.00	44	.33	44	GLOR UNIF
827	LOAD Y	70	68	14.33	44	.33	44	GLOR UNIF
828	LOAD Y	70	68	14.66	44	.33	44	GLOR UNIF
829	LOAD Y	70	68	15.00	44	.33	44	GLOR UNIF
830	LOAD Y	70	68	15.33	44	.33	44	GLOR UNIF
831	LOAD Y	70	68	15.66	44	.33	44	GLOR UNIF
832	LOAD Y	70	68	16.00	44	.33	44	GLOR UNIF
833	LOAD Y	70	68	16.33	44	.33	44	GLOR UNIF



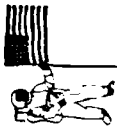
SYNOPSIS INPUT DATA

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3-PILE ACMP STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

LTNE NO. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62

A34	LOAD Y	40	49	0.00	92	6.09	101	GLOR UNIF	AV 0 2
A35	LOAD X	40	49	0.00	08	6.09	39	GLOR UNIF	AV 0 2
A36	LOAD Y	40	49	6.09	1	6.09	1	GLOR UNIF	AV 0 2
A37	LOAD X	40	49	6.09	101	6.09	111	GLOR UNIF	AV 0 2
A38	LOAD Z	40	49	6.09	09	6.09	10	GLOR UNIF	AV 0 2
A39	LOAD X	40	49	12.17	1	6.09	02	GLOR UNIF	AV 0 2
A40	LOAD Y	40	49	12.17	111	6.09	123	GLOR UNIF	AV 0 2
A41	LOAD Z	40	49	12.17	10	6.09	11	GLOR UNIF	AV 0 2
A42	LOAD X	49	55	0.00	1	1.52	1	GLOR UNIF	AV 0 2
A43	LOAD Y	49	55	0.00	123	1.52	126	GLOR UNIF	AV 0 2
A44	LOAD Z	49	55	0.00	10	1.52	10	GLOR UNIF	AV 0 2
A45	LOAD X	49	55	1.52	1	1.52	1	GLOR UNIF	AV 0 2
A46	LOAD Y	49	55	1.52	126	1.52	129	GLOR UNIF	AV 0 2
A47	LOAD Z	49	55	1.52	10	1.52	11	GLOR UNIF	AV 0 2
A48	LOAD X	49	55	3.04	1	1.52	02	GLOR UNIF	AV 0 2
A49	LOAD Y	49	55	3.04	129	1.52	133	GLOR UNIF	AV 0 2
A50	LOAD Z	49	55	3.04	11	1.52	11	GLOR UNIF	AV 0 2
A51	LOAD X	12	24	0.00	1	10.81	1	GLOR UNIF	AV 0 2
A52	LOAD Y	12	24	0.00	51	10.81	52	GLOR UNIF	AV 0 2
A53	LOAD Z	12	24	0.00	04	10.81	04	GLOR UNIF	AV 0 2
A54	LOAD X	12	24	10.81	1	10.81	1	GLOR UNIF	AV 0 2
A55	LOAD Y	12	24	10.81	52	10.81	54	GLOR UNIF	AV 0 2
A56	LOAD Z	12	24	10.81	04	10.81	04	GLOR UNIF	AV 0 2
A57	LOAD X	12	24	21.63	1	10.81	1	GLOR UNIF	AV 0 2
A58	LOAD Y	12	24	21.63	54	10.81	57	GLOR UNIF	AV 0 2
A59	LOAD Z	12	24	21.63	04	10.81	05	GLOR UNIF	AV 0 2
A60	LOAD X	24	36	0.00	1	10.81	1	GLOR UNIF	AV 0 2
A61	LOAD Y	24	36	0.00	57	10.81	62	GLOR UNIF	AV 0 2
A62	LOAD Z	24	36	0.00	05	10.81	05	GLOR UNIF	AV 0 2
A63	LOAD X	24	36	10.81	1	10.81	1	GLOR UNIF	AV 0 2
A64	LOAD Y	24	36	10.81	62	10.81	64	GLOR UNIF	AV 0 2
A65	LOAD Z	24	36	10.81	05	10.81	05	GLOR UNIF	AV 0 2
A66	LOAD X	24	36	21.63	1	10.81	1	GLOR UNIF	AV 0 2
A67	LOAD Y	24	36	21.63	64	10.81	76	GLOR UNIF	AV 0 2
A68	LOAD Z	24	36	21.63	05	10.81	06	GLOR UNIF	AV 0 2
A69	LOAD X	36	41	0.00	1	4.73	1	GLOR UNIF	AV 0 2
A70	LOAD Y	36	41	0.00	76	4.73	82	GLOR UNIF	AV 0 2
A71	LOAD Z	36	41	0.00	05	4.73	06	GLOR UNIF	AV 0 2
A72	LOAD X	36	41	4.73	1	4.73	1	GLOR UNIF	AV 0 2
A73	LOAD Y	36	41	4.73	82	4.73	87	GLOR UNIF	AV 0 2
A74	LOAD Z	36	41	4.73	06	4.73	06	GLOR UNIF	AV 0 2
A75	LOAD X	36	41	9.45	1	4.73	1	GLOR UNIF	AV 0 2
A76	LOAD Y	36	41	9.45	87	4.73	93	GLOR UNIF	AV 0 2
A77	LOAD Z	36	41	9.45	06	4.73	06	GLOR UNIF	AV 0 2
A78	LOAD X	41	51	0.00	1	6.09	1	GLOR UNIF	AV 0 2
A79	LOAD Y	41	51	0.00	92	6.09	101	GLOR UNIF	AV 0 2
A80	LOAD Z	41	51	0.00	08	6.09	09	GLOR UNIF	AV 0 2
A81	LOAD X	41	51	6.09	1	6.09	1	GLOR UNIF	AV 0 2
A82	LOAD Y	41	51	6.09	101	6.09	111	GLOR UNIF	AV 0 2



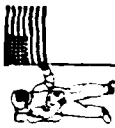
STRAN T O P U T DATA

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3-PILE AC4R STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

LINE NO. 1 2 3 4 5 6 7 8

883	LOAD Z	41	51	6.09	00	6.09	10	GLOR UNIF	AV 0 2
884	LOAD X	41	51	12.17	1	2.09	02	GLOR UNIF	AV 0 2
885	LOAD Y	41	51	12.17	111	6.09	123	GLOR UNIF	AV 0 2
886	LOAD Z	41	51	12.17	10	6.09	11	GLOR UNIF	AV 0 2
887	LOAD X	51	56	0.00	1	1.52	1	GLOR UNIF	AV 0 2
888	LOAD Y	51	56	0.00	123	1.52	126	GLOR UNIF	AV 0 2
889	LOAD Z	51	56	0.00	10	1.52	10	GLOR UNIF	AV 0 2
890	LOAD X	51	56	1.52	1	1.52	1	GLOR UNIF	AV 0 2
891	LOAD Y	51	56	1.52	126	1.52	129	GLOR UNIF	AV 0 2
892	LOAD Z	51	56	1.52	10	1.52	11	GLOR UNIF	AV 0 2
893	LOAD X	51	56	3.04	1	1.52	02	GLOR UNIF	AV 0 2
894	LOAD Y	51	56	3.04	129	1.52	133	GLOR UNIF	AV 0 2
895	LOAD Z	51	56	3.04	11	1.52	11	GLOR UNIF	AV 0 2
896	LOAD X	14	26	0.00	59	10.81	41	GLOR UNIF	AV 0 2
897	LOAD Y	14	26	0.00	07	10.81	07	GLOR UNIF	AV 0 2
898	LOAD Z	14	26	10.81	41	10.81	42	GLOR UNIF	AV 0 2
899	LOAD X	14	26	10.81	07	10.81	07	GLOR UNIF	AV 0 2
900	LOAD Y	14	26	21.63	42	10.81	46	GLOR UNIF	AV 0 2
901	LOAD Z	14	26	21.63	07	10.81	08	GLOR UNIF	AV 0 2
902	LOAD X	26	38	0.00	45	10.86	47	GLOR UNIF	AV 0 2
903	LOAD Y	26	38	0.00	09	10.86	09	GLOR UNIF	AV 0 2
904	LOAD Z	26	38	10.86	47	10.86	51	GLOR UNIF	AV 0 2
905	LOAD X	26	38	10.86	09	10.86	10	GLOR UNIF	AV 0 2
906	LOAD Y	26	38	21.72	51	10.86	55	GLOR UNIF	AV 0 2
907	LOAD Z	26	38	21.72	10	10.86	10	GLOR UNIF	AV 0 2
908	LOAD X	34	42	0.00	51	5.01	55	GLOR UNIF	AV 0 2
909	LOAD Y	34	42	0.00	20	5.01	21	GLOR UNIF	AV 0 2
910	LOAD Z	34	42	5.01	55	5.01	59	GLOR UNIF	AV 0 2
911	LOAD X	34	42	5.01	21	5.01	23	GLOR UNIF	AV 0 2
912	LOAD Y	34	42	10.02	59	5.01	64	GLOR UNIF	AV 0 2
913	LOAD Z	34	42	10.02	23	5.01	25	GLOR UNIF	AV 0 2
914	LOAD X	42	53	0.00	53	5.31	54	GLOR UNIF	AV 0 2
915	LOAD Y	42	53	0.00	53	5.31	56	GLOR UNIF	AV 0 2
916	LOAD Z	42	53	5.31	54	5.31	64	GLOR UNIF	AV 0 2
917	LOAD X	42	53	5.31	56	5.31	60	GLOR UNIF	AV 0 2
918	LOAD Y	42	53	10.63	64	5.31	70	GLOR UNIF	AV 0 2
919	LOAD Z	42	53	10.63	60	5.31	60	GLOR UNIF	AV 0 2
920	LOAD X	42	53	15.94	70	5.31	74	GLOR UNIF	AV 0 2
921	LOAD Y	42	53	15.94	64	5.31	69	GLOR UNIF	AV 0 2
922	LOAD Z	42	53	0.00	106	1.52	109	GLOR UNIF	AV 0 2
923	LOAD X	53	57	0.00	14	1.52	14	GLOR UNIF	AV 0 2
924	LOAD Y	53	57	1.52	109	1.52	113	GLOR UNIF	AV 0 2
925	LOAD Z	53	57	1.52	14	1.52	14	GLOR UNIF	AV 0 2
926	LOAD X	53	57	3.04	113	1.52	116	GLOR UNIF	AV 0 2
927	LOAD Y	53	57	3.04	19	1.52	19	GLOR UNIF	AV 0 2
928	LOAD Z	53	57	0.00	23	9.67	23	GLOR UNIF	AV 0 2
929	LOAD X	10	11	9.67	23	9.67	23	GLOR UNIF	AV 0 2
930	LOAD Y	10	11	19.33	23	9.67	23	GLOR UNIF	AV 0 2
931	LOAD Z	10	11	0.00	23	9.67	23	GLOR UNIF	AV 0 2



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PILE AREA STRUCTURE -- U.S. NAVY (30-1), DIAPHRAGM PILING) -- C. CHERN

LINE NO.	1	2	3	4	5	6	7	8
932	LOAD Y	11	12	9.67-	23	9.67-	23	GLOR UNIF
933	LOAD Y	11	12	9.67-	23	9.67-	23	GLOR UNIF
934	LOAD X	12	13	0.00	10	0.67	10	GLOR UNIF
935	LOAD Y	12	13	0.00	06	9.67-	06	GLOR UNIF
936	LOAD X	12	13	9.67	10	9.67	10	GLOR UNIF
937	LOAD Y	12	13	9.67-	06	9.67-	06	GLOR UNIF
938	LOAD X	12	13	19.53	10	9.67	09	GLOR UNIF
939	LOAD Y	12	13	19.53-	06	9.67-	05	GLOR UNIF
940	LOAD X	13	14	0.00	09	9.67	09	GLOR UNIF
941	LOAD Y	13	14	0.00-	05	9.67-	05	GLOR UNIF
942	LOAD X	13	14	9.67	09	9.67	09	GLOR UNIF
943	LOAD Y	13	14	9.67-	05	9.67-	05	GLOR UNIF
944	LOAD X	13	14	19.54	09	9.67	09	GLOR UNIF
945	LOAD Y	13	14	19.54-	05	9.67-	05	GLOR UNIF
946	LOAD X	14	15	0.00-	09	9.67-	09	GLOR UNIF
947	LOAD Y	14	15	0.00-	05	9.67-	05	GLOR UNIF
948	LOAD X	14	15	9.67-	09	9.67-	09	GLOR UNIF
949	LOAD Y	14	15	19.54-	05	9.67-	05	GLOR UNIF
950	LOAD X	14	15	19.54-	09	9.67-	09	GLOR UNIF
951	LOAD Y	14	15	19.54-	05	9.67-	05	GLOR UNIF
952	LOAD X	15	16	0.00-	09	9.67-	09	GLOR UNIF
953	LOAD Y	15	16	0.00-	05	9.67-	05	GLOR UNIF
954	LOAD X	15	16	9.67-	09	9.67-	09	GLOR UNIF
955	LOAD Y	15	16	9.67-	06	9.67-	06	GLOR UNIF
956	LOAD X	15	16	19.53-	10	9.67-	10	GLOR UNIF
957	LOAD Y	15	16	19.53-	06	9.67-	06	GLOR UNIF
958	LOAD X	11	13	0.00-	09	9.67-	09	GLOR UNIF
959	LOAD Y	11	13	0.00-	04	9.67-	04	GLOR UNIF
960	LOAD X	11	13	9.67-	09	9.67-	09	GLOR UNIF
961	LOAD Y	11	13	9.67-	04	9.67-	04	GLOR UNIF
962	LOAD X	11	13	19.53-	07	9.67-	07	GLOR UNIF
963	LOAD Y	11	13	19.53-	04	9.67-	04	GLOR UNIF
964	LOAD X	13	15	0.00-	17	9.67-	17	GLOR UNIF
965	LOAD Y	13	15	9.67-	17	9.67-	17	GLOR UNIF
966	LOAD X	13	15	19.53-	17	9.67-	17	GLOR UNIF
967	LOAD Y	15	11	0.00	07	9.67	07	GLOR UNIF
968	LOAD X	15	11	0.00-	04	9.67-	04	GLOR UNIF
969	LOAD Y	15	11	9.67	07	9.67	07	GLOR UNIF
970	LOAD X	15	11	9.67-	04	9.67-	04	GLOR UNIF
971	LOAD Y	15	11	19.53	09	9.67	09	GLOR UNIF
972	LOAD X	15	11	19.53-	04	9.67-	04	GLOR UNIF
973	LOAD Y	22	23	0.00-	26	9.13-	26	GLOR UNIF
974	LOAD X	22	23	9.13-	26	9.13-	26	GLOR UNIF
975	LOAD Y	22	23	16.25-	26	9.13-	26	GLOR UNIF
976	LOAD X	23	24	0.00-	26	9.13-	26	GLOR UNIF
977	LOAD Y	23	24	9.13-	26	9.13-	26	GLOR UNIF
978	LOAD X	23	24	16.25-	26	9.13-	26	GLOR UNIF
979	LOAD Y	24	25	0.00	11	9.13	11	GLOR UNIF
980	LOAD X	24	25	0.00-	06	9.13-	06	GLOR UNIF



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SAMPLE ACMR STRUCTURE -- U.S. NAVY (36-14, DIAMETER PILING) -- C. CHERN

LINE NO.	1	2	3	4	5	6	7	8
981	LOAD X	24	25	A.13	11	A.13	11	GLOR UNTF
982	LOAD Y	24	25	A.13	06	A.13	06	GLOR UNTF
983	LOAD X	24	25	16.25	11	A.13	11	GLOR UNTF
984	LOAD Y	24	25	16.25	06	A.13	06	GLOR UNTF
985	LOAD X	25	26	0.00	11	A.13	10	GLOR UNTF
986	LOAD Y	25	26	0.00	06	A.13	06	GLOR UNTF
987	LOAD X	25	26	A.13	10	A.13	10	GLOR UNTF
988	LOAD Y	25	26	A.13	06	A.13	06	GLOR UNTF
989	LOAD X	25	26	16.25	10	A.13	09	GLOR UNTF
990	LOAD Y	25	26	16.25	06	A.13	05	GLOR UNTF
991	LOAD X	26	27	0.00	09	A.13	10	GLOR UNTF
992	LOAD Y	26	27	0.00	05	A.13	06	GLOR UNTF
993	LOAD X	26	27	A.13	10	A.13	10	GLOR UNTF
994	LOAD Y	26	27	A.13	06	A.13	06	GLOR UNTF
995	LOAD X	26	27	16.25	10	A.13	11	GLOR UNTF
996	LOAD Y	26	27	16.25	06	A.13	06	GLOR UNTF
997	LOAD X	27	22	0.00	11	A.13	11	GLOR UNTF
998	LOAD Y	27	22	0.00	06	A.13	06	GLOR UNTF
999	LOAD X	27	22	A.13	11	A.13	11	GLOR UNTF
1000	LOAD Y	27	22	A.13	06	A.13	06	GLOR UNTF
1001	LOAD X	27	22	16.25	11	A.13	11	GLOR UNTF
1002	LOAD Y	27	22	16.25	06	A.13	06	GLOR UNTF
1003	LOAD X	23	25	0.00	09	A.13	09	GLOR UNTF
1004	LOAD Y	23	25	0.00	05	A.13	05	GLOR UNTF
1005	LOAD X	23	25	A.13	09	A.13	08	GLOR UNTF
1006	LOAD Y	23	25	A.13	05	A.13	04	GLOR UNTF
1007	LOAD X	23	25	16.25	08	A.13	08	GLOR UNTF
1008	LOAD Y	23	25	16.25	05	A.13	05	GLOR UNTF
1009	LOAD X	25	27	0.00	19	A.13	19	GLOR UNTF
1010	LOAD Y	25	27	A.13	19	A.13	19	GLOR UNTF
1011	LOAD X	25	27	16.25	19	A.13	19	GLOR UNTF
1012	LOAD Y	27	23	0.00	08	A.13	08	GLOR UNTF
1013	LOAD X	27	23	0.00	05	A.13	05	GLOR UNTF
1014	LOAD X	27	23	A.13	08	A.13	09	GLOR UNTF
1015	LOAD Y	27	23	A.13	05	A.13	05	GLOR UNTF
1016	LOAD X	27	23	16.25	09	A.13	09	GLOR UNTF
1017	LOAD Y	27	23	16.25	05	A.13	05	GLOR UNTF
1018	LOAD X	34	35	0.00	24	6.59	24	GLOR UNTF
1019	LOAD Y	34	35	6.59	24	6.59	24	GLOR UNTF
1020	LOAD X	34	35	13.18	24	6.59	24	GLOR UNTF
1021	LOAD Y	35	36	0.00	24	6.59	24	GLOR UNTF
1022	LOAD X	35	36	6.59	24	6.59	24	GLOR UNTF
1023	LOAD Y	35	36	13.14	24	6.59	24	GLOR UNTF
1024	LOAD X	36	37	0.00	10	6.59	10	GLOR UNTF
1025	LOAD Y	36	37	0.00	06	6.59	06	GLOR UNTF
1026	LOAD X	36	37	6.59	10	6.59	10	GLOR UNTF
1027	LOAD Y	36	37	6.59	06	6.59	06	GLOR UNTF
1028	LOAD X	37	37	13.14	10	6.59	10	GLOR UNTF
1029	LOAD Y	37	37	13.14	06	6.59	06	GLOR UNTF



1030	LOAN	X	37	3A	0.00	07	10.07	07	GLIA	UNIF	WV	0	2
1031	LOAN	V	37	3A	0.00	02	10.07	02	GLIA	UNIF	WV	0	2
1032	LOAN	X	37	3A	10.07	07	10.07	06	GLIA	UNIF	WV	0	2
1033	LOAN	V	37	3A	10.07	02	10.07	02	GLIA	UNIF	WV	0	2
1034	LOAN	X	37	3A	20.15	06	10.07	06	GLIA	UNIF	WV	0	2
1035	LOAN	V	37	3A	20.15	02	10.07	02	GLIA	UNIF	WV	0	2
1036	LOAN	X	3A	39	0.00	06	10.07	06	GLIA	UNIF	WV	0	2
1037	LOAN	V	3A	39	0.00	02	10.07	02	GLIA	UNIF	WV	0	2
1038	LOAN	X	3A	39	10.07	06	10.07	07	GLIA	UNIF	WV	0	2
1039	LOAN	V	3A	39	10.07	02	10.07	02	GLIA	UNIF	WV	0	2
1040	LOAN	X	3A	39	20.15	07	10.07	07	GLIA	UNIF	WV	0	2
1041	LOAN	V	38	39	20.15	02	10.07	02	GLIA	UNIF	WV	0	2
1042	LOAN	X	39	34	0.00	10	6.59	10	GLIA	UNIF	WV	0	2
1043	LOAN	V	39	34	0.00	06	6.59	06	GLIA	UNIF	WV	0	2
1044	LOAN	X	39	34	6.59	10	6.59	10	GLIA	UNIF	WV	0	2
1045	LOAN	V	39	34	6.59	06	6.59	06	GLIA	UNIF	WV	0	2
1046	LOAN	X	39	34	13.18	10	6.59	10	GLIA	UNIF	WV	0	2
1047	LOAN	V	39	34	13.18	06	6.59	06	GLIA	UNIF	WV	0	2
1048	LOAN	X	35	37	0.00	10	6.59	10	GLIA	UNIF	WV	0	2
1049	LOAN	V	35	37	0.00	06	6.59	06	GLIA	UNIF	WV	0	2
1050	LOAN	X	35	37	6.59	10	6.59	10	GLIA	UNIF	WV	0	2
1051	LOAN	V	35	37	6.59	06	6.59	06	GLIA	UNIF	WV	0	2
1052	LOAN	X	35	37	13.18	10	6.59	10	GLIA	UNIF	WV	0	2
1053	LOAN	V	35	37	13.18	06	6.59	06	GLIA	UNIF	WV	0	2
1054	LOAN	X	37	39	0.00	23	6.59	23	GLIA	UNIF	WV	0	2
1055	LOAN	V	37	39	6.59	23	6.59	23	GLIA	UNIF	WV	0	2
1056	LOAN	X	37	39	13.17	23	6.59	23	GLIA	UNIF	WV	0	2
1057	LOAN	V	39	35	0.00	10	6.59	10	GLIA	UNIF	WV	0	2
1058	LOAN	X	39	35	0.00	06	6.59	06	GLIA	UNIF	WV	0	2
1059	LOAN	V	39	35	6.59	10	6.59	10	GLIA	UNIF	WV	0	2
1060	LOAN	X	39	35	6.59	06	6.59	06	GLIA	UNIF	WV	0	2
1061	LOAN	V	39	35	13.18	10	6.59	10	GLIA	UNIF	WV	0	2
1062	LOAN	X	39	35	13.18	06	6.59	06	GLIA	UNIF	WV	0	2
1063	LOAN	V	49	50	0.00	4A	5.05	4A	GLIA	UNIF	WV	0	2
1064	LOAN	X	49	50	5.05	4A	5.05	4A	GLIA	UNIF	WV	0	2
1065	LOAN	V	49	50	10.10	4A	5.05	4A	GLIA	UNIF	WV	0	2
1066	LOAN	X	50	51	0.00	4A	5.05	4A	GLIA	UNIF	WV	0	2
1067	LOAN	V	50	51	5.05	4A	5.05	4A	GLIA	UNIF	WV	0	2
1068	LOAN	X	50	51	10.10	4A	5.05	4A					

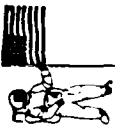


STRAIGHT LAY A

LINE NO.	1	2	3	4	5	6	7
1079	LQAD X	52	53	10.10	.19	5.05	14
1080	LQAD Y	52	53	10.10	11	5.05	11
1081	LQAD X	53	54	0.00	14	5.05	19
1082	LQAD Y	53	54	0.00	11	5.05	11
1083	LQAD X	53	54	5.05	19	5.05	20
1084	LQAD Y	53	54	5.05	11	5.05	11
1085	LQAD X	53	54	10.10	20	5.05	20
1086	LQAD Y	53	54	10.10	11	5.05	12
1087	LQAD X	54	49	0.00	20	5.05	20
1088	LQAD Y	54	49	0.00	12	5.05	12
1089	LQAD X	54	49	5.05	20	5.05	21
1090	LQAD Y	54	49	5.05	12	5.05	12
1091	LQAD X	54	49	10.10	21	5.05	21
1092	LQAD Y	54	49	10.10	12	5.05	12
1093	LQAD X	50	52	0.00	17	5.05	16
1094	LQAD Y	50	52	0.00	10	5.05	04
1095	LQAD X	50	52	5.05	16	5.05	16
1096	LQAD Y	50	52	5.05	09	5.05	09
1097	LQAD X	50	52	10.10	16	5.05	16
1098	LQAD Y	50	52	10.10	09	5.05	09
1099	LQAD X	52	54	0.00	37	5.05	37
1100	LQAD Y	52	54	5.05	37	5.05	37
1101	LQAD X	52	54	10.09	37	5.05	37
1102	LQAD Y	54	50	0.00	16	5.05	16
1103	LQAD X	54	50	0.00	09	5.05	09
1104	LQAD Y	54	50	5.05	16	5.05	16
1105	LQAD X	54	50	5.05	09	5.05	09
1106	LQAD Y	54	50	10.10	16	5.05	17
1107	LQAD X	54	50	10.10	09	5.05	10
1108	LQAD Y	11	22	0.00	1	13.44	1
1109	LQAD X	11	22	0.00	21	13.44	21
1110	LQAD Z	11	22	0.00	1	13.44	1
1111	LQAD X	11	22	13.44	1	13.44	1
1112	LQAD Y	11	22	13.44	21	13.44	22
1113	LQAD Z	11	22	13.44	1	13.44	1
1114	LQAD X	11	22	26.88	1	13.44	1
1115	LQAD Y	11	22	26.88	22	13.44	23
1116	LQAD Z	11	22	26.88	1	13.44	1
1117	LQAD X	11	24	0.00	1	13.44	1
1118	LQAD Y	11	24	0.00	21	13.44	21
1119	LQAD Z	11	24	0.00	1	13.44	1
1120	LQAD X	11	24	13.44	1	13.44	1
1121	LQAD Y	11	24	13.44	21	13.44	22
1122	LQAD Z	11	24	13.44	1	13.44	1
1123	LQAD X	11	24	26.88	1	13.44	1
1124	LQAD Y	11	24	26.88	22	13.44	23
1125	LQAD Z	11	24	26.88	1	13.44	1
1126	LQAD X	13	24	0.00	03	13.44	03
1127	LQAD Y	13	24	0.00	13	13.44	14



LINE NO.	1	2	3	4	5	6	7	8
1128	LOAD	2	13	24	0.00	08	13.44	09
1129	LOAD	X	13	24	13.44	03	13.44	03
1130	LOAD	Y	13	24	13.44	14	13.44	15
1131	LOAD	Z	13	24	13.44	09	13.44	09
1132	LOAD	X	13	24	26.88	03	13.44	03
1133	LOAD	Y	13	24	26.88	15	13.44	16
1134	LOAD	Z	13	24	26.88	09	13.44	10
1135	LOAD	X	13	26	0.00	03	13.44	03
1136	LOAD	Y	13	26	0.00	15	13.44	14
1137	LOAD	Z	13	26	0.00	07	13.44	07
1138	LOAD	X	13	26	13.44	03	13.44	03
1139	LOAD	Y	13	26	13.44	14	13.44	14
1140	LOAD	Z	13	26	13.44	07	13.44	07
1141	LOAD	X	13	26	26.88	03	13.44	03
1142	LOAD	Y	13	26	26.88	14	13.44	14
1143	LOAD	Z	13	26	26.88	07	13.44	07
1144	LOAD	X	15	26	0.00	03	13.44	03
1145	LOAD	Y	15	26	0.00	15	13.44	14
1146	LOAD	Z	15	26	0.00	07	13.44	07
1147	LOAD	X	15	26	13.44	03	13.44	03
1148	LOAD	Y	15	26	13.44	14	13.44	14
1149	LOAD	Z	15	26	13.44	07	13.44	07
1150	LOAD	X	15	26	26.88	03	13.44	03
1151	LOAD	Y	15	26	26.88	14	13.44	14
1152	LOAD	Z	15	26	26.88	07	13.44	07
1153	LOAD	X	15	22	0.00	03	13.44	03
1154	LOAD	Y	15	22	0.00	13	13.44	14
1155	LOAD	Z	15	22	0.00	08	13.44	09
1156	LOAD	X	15	22	13.44	03	13.44	03
1157	LOAD	Y	15	22	13.44	14	13.44	15
1158	LOAD	Z	15	22	13.44	09	13.44	09
1159	LOAD	X	15	22	26.88	03	13.44	03
1160	LOAD	Y	15	22	26.88	15	13.44	16
1161	LOAD	Z	15	22	26.88	09	13.44	10
1162	LOAD	X	22	36	0.00	1	18.20	1
1163	LOAD	Y	22	36	0.00	29	18.20	31
1164	LOAD	Z	22	36	0.00	1	18.20	1
1165	LOAD	X	22	36	18.20	1	18.20	1
1166	LOAD	Y	22	36	18.20	31	18.20	50
1167	LOAD	Z	22	36	18.20	1	18.20	1
1168	LOAD	X	22	36	36.39	1	18.20	1
1169	LOAD	Y	22	36	36.39	34	18.20	34
1170	LOAD	Z	22	36	36.39	1	18.20	1
1171	LOAD	X	24	34	0.00	09	20.96	09
1172	LOAD	Y	24	34	0.00	12	20.96	12
1173	LOAD	Z	24	34	0.00	11	20.96	12
1174	LOAD	X	24	34	20.96	09	20.96	09
1175	LOAD	Y	24	34	20.96	12	20.96	12
1176	LOAD	Z	24	34	20.96	12	20.96	12



S T R A C T I N P U T I A T A

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TOPILE ACNR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

LINE NO.	1	2	3	4	5	6	7	8
1177	LOAD X	24	34	41.93	09	20.94	CA	GLOR UNIF
1178	LOAD Y	24	34	41.93	12	20.94	12	GLOR UNIF
1179	LOAD Z	24	34	41.93	12	20.94	11	GLOR UNIF
1180	LOAD X	26	34	0.00	06	13.65	07	GLOR UNIF
1181	LOAD Y	26	34	0.00	11	13.65	13	GLOR UNIF
1182	LOAD Z	26	34	0.00	10	13.65	11	GLOR UNIF
1183	LOAD X	26	34	13.65	07	13.65	04	GLOR UNIF
1184	LOAD Y	26	34	13.65	13	13.65	14	GLOR UNIF
1185	LOAD Z	26	34	13.65	11	13.65	13	GLOR UNIF
1186	LOAD X	26	34	27.29	08	13.65	09	GLOR UNIF
1187	LOAD Y	26	34	27.29	14	13.65	16	GLOR UNIF
1188	LOAD Z	26	34	27.29	13	13.65	14	GLOR UNIF
1189	LOAD X	26	34	40.91	09	13.65	10	GLOR UNIF
1190	LOAD Y	26	34	40.91	16	13.65	14	GLOR UNIF
1191	LOAD Z	26	34	40.91	14	13.65	16	GLOR UNIF
1192	LOAD X	36	49	0.00	02	11.86	02	GLOR UNIF
1193	LOAD Y	36	49	0.00	58	11.86	42	GLOR UNIF
1194	LOAD Z	36	49	0.00	1	11.86	02	GLOR UNIF
1195	LOAD X	36	49	11.86	02	11.86	02	GLOR UNIF
1196	LOAD Y	36	49	11.86	42	11.86	46	GLOR UNIF
1197	LOAD Z	36	49	11.86	02	11.86	02	GLOR UNIF
1198	LOAD X	36	49	23.72	02	11.86	02	GLOR UNIF
1199	LOAD Y	36	49	23.72	46	11.86	53	GLOR UNIF
1200	LOAD Z	36	49	23.72	02	11.86	02	GLOR UNIF
1201	LOAD X	36	49	35.54	02	11.86	02	GLOR UNIF
1202	LOAD Y	36	49	35.54	53	11.86	60	GLOR UNIF
1203	LOAD Z	36	49	35.54	02	11.86	02	GLOR UNIF
1204	LOAD X	38	51	0.00	06	9.29	07	GLOR UNIF
1205	LOAD Y	38	51	0.00	11	9.29	13	GLOR UNIF
1206	LOAD Z	38	51	0.00	13	9.29	15	GLOR UNIF
1207	LOAD X	38	51	9.29	07	9.29	04	GLOR UNIF
1208	LOAD Y	38	51	9.29	13	9.29	15	GLOR UNIF
1209	LOAD Z	38	51	9.29	15	9.29	17	GLOR UNIF
1210	LOAD X	38	51	18.57	08	9.29	02	GLOR UNIF
1211	LOAD Y	38	51	18.57	15	9.29	17	GLOR UNIF
1212	LOAD Z	38	51	18.57	17	9.29	19	GLOR UNIF
1213	LOAD X	38	51	27.46	09	9.29	10	GLOR UNIF
1214	LOAD Y	38	51	27.46	17	9.29	19	GLOR UNIF
1215	LOAD Z	38	51	27.46	19	9.29	21	GLOR UNIF
1216	LOAD X	38	51	37.14	10	9.29	11	GLOR UNIF
1217	LOAD Y	38	51	37.14	19	9.29	22	GLOR UNIF
1218	LOAD Z	38	51	37.14	21	9.29	24	GLOR UNIF
1219	LOAD X	38	51	46.43	11	9.29	13	GLOR UNIF
1220	LOAD Y	38	51	46.43	22	9.29	20	GLOR UNIF
1221	LOAD Z	38	51	46.43	24	9.29	27	GLOR UNIF
1222	LOAD X	38	51	0.00	10	15.81	11	GLOR UNIF
1223	LOAD Y	38	51	0.00	24	15.81	27	GLOR UNIF
1224	LOAD Z	38	51	0.00	16	15.81	17	GLOR UNIF
1225	LOAD X	38	51	15.81	11	15.81	12	GLOR UNIF

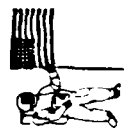


STRAIGHT DATA

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30PILF ACME STRUCTURE -- U.S. NAVY (40-T, DIAMETER PILING) -- C. CHERN

LINE NO.	1	2	3	4	5	6	7	8
1226	LOAN Y	34	53	15.81-	27	15.81-	30	GLOR UNIF
1227	LOAN Z	34	53	15.81-	17	15.81-	20	GLOR UNIF
1228	LOAN X	34	53	31.62-	12	15.81-	13	GLOR UNIF
1229	LOAN Y	34	53	31.62-	30	15.81-	33	GLOR UNIF
1230	LOAN Z	34	53	31.62	20	15.81	22	GLOR UNIF
1231	LOAN Y	55	54	0.00-	117	5.70-	130	GLOR UNIF
1232	LOAN Y	55	54	5.70-	130	5.70-	144	GLOR UNIF
1233	LOAN Y	55	54	11.00-	146	5.70-	163	GLOR UNIF
1234	LOAN Y	55	54	17.10-	163	5.70-	185	GLOR UNIF
1235	LOAN Y	55	54	22.80-	185	5.70-	210	GLOR UNIF
1236	LOAN Y	56	61	0.00-	210	3.97-	229	GLOR UNIF
1237	LOAN Y	54	61	3.97-	229	3.97-	248	GLOR UNIF
1238	LOAN Y	54	61	7.95-	248	3.97-	275	GLOR UNIF
1239	LOAN Y	56	59	0.00-	117	5.70-	130	GLOR UNIF
1240	LOAN Y	56	59	5.70-	130	5.70-	146	GLOR UNIF
1241	LOAN Y	56	59	11.40-	146	5.70-	163	GLOR UNIF
1242	LOAN Y	56	59	17.10-	163	5.70-	185	GLOR UNIF
1243	LOAN Y	56	59	22.80-	185	5.70-	210	GLOR UNIF
1244	LOAN Y	59	64	0.00-	210	3.97-	229	GLOR UNIF
1245	LOAN Y	59	64	3.97-	229	3.97-	248	GLOR UNIF
1246	LOAN Y	59	64	7.95-	248	3.97-	275	GLOR UNIF
1247	LOAN Y	57	60	0.00-	104	5.70-	116	GLOR UNIF
1248	LOAN Y	57	60	5.70-	116	5.70-	129	GLOR UNIF
1249	LOAN Y	57	60	11.40-	129	5.70-	144	GLOR UNIF
1250	LOAN Y	57	60	17.10-	144	5.70-	163	GLOR UNIF
1251	LOAN Y	57	60	22.80-	163	5.70-	183	GLOR UNIF
1252	LOAN Y	60	70	0.00-	183	2.00-	192	GLOR UNIF
1253	LOAN Y	60	70	2.00-	192	2.00-	201	GLOR UNIF
1254	LOAN Y	60	70	4.00-	201	2.00-	209	GLOR UNIF
1255	LOAN Y	70	67	0.00-	209	1.35-	215	GLOR UNIF
1256	LOAN Y	70	67	1.35-	215	1.35-	223	GLOR UNIF
1257	LOAN Y	70	67	2.71-	223	1.35-	231	GLOR UNIF
1258	LOAN Y	54	59	0.00-	74	9.67-	74	GLOR UNIF
1259	LOAN Y	54	59	9.67-	74	9.67-	74	GLOR UNIF
1260	LOAN Y	54	59	19.33-	74	9.67-	74	GLOR UNIF
1261	LOAN X	59	60	0.00	32	9.67	31	GLOR UNIF
1262	LOAN Y	59	60	0.00-	19	9.67-	14	GLOR UNIF
1263	LOAN X	59	60	9.67	31	9.67	30	GLOR UNIF
1264	LOAN Y	59	60	9.67-	14	9.67-	17	GLOR UNIF
1265	LOAN X	59	60	19.33	30	9.67	28	GLOR UNIF
1266	LOAN Y	59	60	19.33-	17	9.67-	14	GLOR UNIF
1267	LOAN X	60	54	0.00-	28	9.67-	30	GLOR UNIF
1268	LOAN Y	60	54	0.00-	14	9.67-	17	GLOR UNIF
1269	LOAN X	60	54	9.67-	30	9.67-	31	GLOR UNIF
1270	LOAN Y	60	54	9.67-	17	9.67-	14	GLOR UNIF
1271	LOAN X	60	54	19.33-	31	9.67-	32	GLOR UNIF
1272	LOAN Y	60	54	19.33-	14	9.67-	19	GLOR UNIF
1273	LOAN Y	59	61	0.00-	74	8.65-	81	GLOR UNIF
1274	LOAN Y	59	61	8.65-	81	8.65-	88	GLOR UNIF



STRAN INPUT DATA

3-PILE APCAR STRUCTURE -- .S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

LINE NO.	1	2	3	4	5	6	7	8
1275	LOAD Y	59	61	17.29	RA	8.65	97	GLOR INTF
1276	LOAD X	60	64	0.00	22	6.25	25	GLOR INTF
1277	LOAD Y	60	64	0.00	24	6.25	29	GLOR INTF
1278	LOAD Z	60	64	0.00	23	6.25	25	GLOR INTF
1279	LOAD X	60	64	6.25	25	6.25	27	GLOR INTF
1280	LOAD Y	60	64	6.25	29	6.25	32	GLOR INTF
1281	LOAD Z	60	64	6.25	25	6.25	24	GLOR INTF
1282	LOAD X	60	64	12.49	27	6.25	30	GLOR INTF
1283	LOAD Y	60	64	12.49	32	6.25	34	GLOR INTF
1284	LOAD Z	60	64	12.49	28	6.25	31	GLOR INTF
1285	LOAD X	60	64	18.74	30	6.25	33	GLOR INTF
1286	LOAD Y	60	64	18.74	36	6.25	39	GLOR INTF
1287	LOAD Z	60	64	18.74	31	6.25	34	GLOR INTF
1288	LOAD X	58	67	0.00	25	7.69	27	GLOR INTF
1289	LOAD Y	58	67	0.00	30	7.69	32	GLOR INTF
1290	LOAD Z	58	67	0.00	26	7.69	28	GLOR INTF
1291	LOAD X	58	67	7.69	27	7.69	24	GLOR INTF
1292	LOAD Y	58	67	7.69	32	7.69	30	GLOR INTF
1293	LOAD Z	58	67	7.69	28	7.69	29	GLOR INTF
1294	LOAD X	58	67	15.38	24	7.69	30	GLOR INTF
1295	LOAD Y	58	67	15.38	34	7.69	36	GLOR INTF
1296	LOAD Z	58	67	15.38	29	7.69	31	GLOR INTF
1297	LOAD X	70	66	0.00	34	2.02	40	GLOR INTF
1298	LOAD Y	70	66	2.02	40	2.02	41	GLOR INTF
1299	LOAD Z	70	66	4.04	41	2.02	44	GLOR INTF
1300	LOAD X	70	68	0.00	38	2.02	40	GLOR INTF
1301	LOAD Y	70	68	2.02	40	2.02	41	GLOR INTF
1302	LOAD Z	70	68	4.04	41	2.02	43	GLOR INTF
1303	LOAD X	3	4	0.00	557	6.06	557	GLOR INTF
1304	LOAD Y	4	16	0.00	557	32.44	557	GLOR INTF
1305	LOAD Z	16	28	0.00	403	32.44	403	GLOR INTF
1306	LOAD X	28	43	0.00	403	32.44	403	GLOR INTF
1307	LOAD Y	43	55	0.00	403	4.59	403	GLOR INTF
1308	LOAD Z	5	5	0.00	557	6.06	557	GLOR INTF
1309	LOAD X	5	17	0.00	557	32.44	557	GLOR INTF
1310	LOAD Y	17	29	0.00	403	32.44	403	GLOR INTF
1311	LOAD Z	29	44	0.00	403	32.44	403	GLOR INTF
1312	LOAD X	44	56	0.00	403	4.59	403	GLOR INTF
1313	LOAD Y	56	6	0.00	557	6.06	557	GLOR INTF
1314	LOAD Z	6	18	0.00	557	32.44	557	GLOR INTF
1315	LOAD X	18	30	0.00	403	32.44	403	GLOR INTF
1316	LOAD Y	30	45	0.00	403	36.13	403	GLOR INTF
1317	LOAD Z	45	57	0.00	403	4.54	403	GLOR INTF
1318	LOAD X	57	70	0.00	403	4.54	403	GLOR INTF
1319	LOAD Y	70	22	0.00	183	32.44	183	GLOR INTF
1320	LOAD Z	22	34	0.00	183	32.44	183	GLOR INTF
1321	LOAD X	34	40	0.00	371	14.18	371	GLOR INTF
1322	LOAD Y	40	49	0.00	371	18.26	371	GLOR INTF
1323	LOAD Z	49	55	0.00	371	4.56	371	GLOR INTF



1324	LOAD Z	12	24	0.00	- .143	32.40	- .143	GLOR UNTF	DL 0 3
1325	LOAD Z	24	36	0.00	- .143	32.04	- .143	GLOR UNTF	DL 0 3
1326	LOAD Z	36	41	0.00	- .371	11.14	- .371	GLOR UNTF	DL 0 3
1327	LOAD Z	41	51	0.00	- .371	14.24	- .371	GLOR UNTF	DL 0 3
1328	LOAD Z	51	56	0.00	- .371	4.56	- .371	GLOR UNTF	DL 0 3
1329	LOAD Z	14	26	0.00	- .143	32.40	- .143	GLOR UNTF	DL 0 3
1330	LOAD Z	26	34	0.00	- .143	32.54	- .143	GLOR UNTF	DL 0 3
1331	LOAD Z	34	42	0.00	- .371	14.04	- .371	GLOR UNTF	DL 0 3
1332	LOAD Z	42	53	0.00	- .371	21.26	- .371	GLOR UNTF	DL 0 3
1333	LOAD Z	53	57	0.00	- .371	4.56	- .371	GLOR UNTF	DL 0 3
1334	LOAD Z	10	11	1.71	- .041	25.54	- .041	GLOR UNTF	DL 0 3
1335	LOAD Z	11	12	1.71	- .041	25.54	- .041	GLOR UNTF	DL 0 3
1336	LOAD Z	12	13	1.71	- .041	25.54	- .041	GLOR UNTF	DL 0 3
1337	LOAD Z	13	14	1.71	- .041	25.54	- .041	GLOR UNTF	DL 0 3
1338	LOAD Z	14	15	1.71	- .041	25.54	- .041	GLOR UNTF	DL 0 3
1339	LOAD Z	15	10	1.71	- .041	25.54	- .041	GLOR UNTF	DL 0 3
1340	LOAD Z	11	13	1.41	- .047	26.17	- .047	GLOR UNTF	DL 0 3
1341	LOAD Z	13	15	1.41	- .047	26.17	- .047	GLOR UNTF	DL 0 3
1342	LOAD Z	15	11	1.41	- .047	26.17	- .047	GLOR UNTF	DL 0 3
1343	LOAD Z	22	23	1.71	- .041	20.96	- .041	GLOR UNTF	DL 0 3
1344	LOAD Z	23	24	1.71	- .041	20.96	- .041	GLOR UNTF	DL 0 3
1345	LOAD Z	24	25	1.71	- .041	20.96	- .041	GLOR UNTF	DL 0 3
1346	LOAD Z	25	26	1.71	- .041	20.96	- .041	GLOR UNTF	DL 0 3
1347	LOAD Z	26	27	1.71	- .041	20.96	- .041	GLOR UNTF	DL 0 3
1348	LOAD Z	27	22	1.71	- .041	20.96	- .041	GLOR UNTF	DL 0 3
1349	LOAD Z	23	25	1.41	- .047	21.55	- .047	GLOR UNTF	DL 0 3
1350	LOAD Z	25	27	1.41	- .047	21.55	- .047	GLOR UNTF	DL 0 3
1351	LOAD Z	27	23	1.41	- .047	21.55	- .047	GLOR UNTF	DL 0 3
1352	LOAD Z	34	35	1.71	- .057	16.35	- .057	GLOR UNTF	DL 0 3
1353	LOAD Z	35	36	1.71	- .057	16.35	- .057	GLOR UNTF	DL 0 3
1354	LOAD Z	36	37	1.71	- .057	16.35	- .057	GLOR UNTF	DL 0 3
1355	LOAD Z	37	34	1.71	- .057	16.35	- .057	GLOR UNTF	DL 0 3
1356	LOAD Z	34	39	1.71	- .057	26.80	- .057	GLOR UNTF	DL 0 3
1357	LOAD Z	39	34	1.71	- .057	16.35	- .057	GLOR UNTF	DL 0 3
1358	LOAD Z	35	37	1.71	- .043	16.35	- .043	GLOR UNTF	DL 0 3
1359	LOAD Z	37	39	1.71	- .043	16.35	- .043	GLOR UNTF	DL 0 3
1360	LOAD Z	39	35	1.71	- .043	16.35	- .043	GLOR UNTF	DL 0 3
1361	LOAD Z	49	50	1.71	- .072	11.73	- .072	GLOR UNTF	DL 0 3
1362	LOAD Z	50	51	1.71	- .072	11.73	- .072	GLOR UNTF	DL 0 3
1363	LOAD Z	51	52	1.71	- .072	11.73	- .072	GLOR UNTF	DL 0 3
1364	LOAD Z	52	53	1.71	- .072	11.73	- .072	GLOR UNTF	DL 0 3
1365	LOAD Z	53	54	1.71	- .072	11.73	- .072	GLOR UNTF	DL 0 3
1366	LOAD Z	54	44	1.71	- .072	11.73	- .072	GLOR UNTF	DL 0 3
1367	LOAD Z	50	52	1.71	- .057	11.73	- .057	GLOR UNTF	DL 0 3
1368	LOAD Z	52	54	1.71	- .057	11.73	- .057	GLOR UNTF	DL 0 3



LINE	NO.	1	2	3	4	5	6	7	8
1373	LOAD 7	13	26	1.71	-0.72	36.90	-0.72	GLOR UNTF	DL 0 3
1374	LOAD 7	15	22	1.71	-0.72	36.90	-0.72	GLOR UNTF	DL 0 3
1375	LOAD 7	15	22	1.71	-0.72	36.90	-0.72	GLOR UNTF	DL 0 3
1376	LOAD 7	22	36	2.42	-1.12	49.76	-1.12	GLOR UNTF	DL 0 3
1377	LOAD 7	24	38	2.42	-1.12	58.06	-1.12	GLOR UNTF	DL 0 3
1378	LOAD 7	26	34	2.42	-1.12	49.76	-1.12	GLOR UNTF	DL 0 3
1379	LOAD 7	36	49	2.42	-1.12	42.61	-1.12	GLOR UNTF	DL 0 3
1380	LOAD 7	38	51	2.42	-1.12	50.89	-1.12	GLOR UNTF	DL 0 3
1381	LOAD 7	34	53	2.42	-1.12	42.60	-1.12	GLOR UNTF	DL 0 3
1382	LOAD 2	4	7	0.00	-1.48	2.00	-1.48	GLOR UNTF	DL 0 3
1383	LOAD 7	7	10	0.00	-1.48	2.50	-1.48	GLOR UNTF	DL 0 3
1384	LOAD 2	5	8	0.00	-1.48	2.00	-1.48	GLOR UNTF	DL 0 3
1385	LOAD 2	8	12	0.00	-1.48	2.50	-1.48	GLOR UNTF	DL 0 3
1386	LOAD 2	6	9	0.00	-1.48	2.00	-1.48	GLOR UNTF	DL 0 3
1387	LOAD 2	9	14	0.00	-1.48	2.50	-1.48	GLOR UNTF	DL 0 3
1388	LOAD 2	16	19	0.00	-1.48	2.40	-1.48	GLOR UNTF	DL 0 3
1389	LOAD 2	19	22	0.00	-1.48	2.50	-1.48	GLOR UNTF	DL 0 3
1390	LOAD 2	17	20	0.00	-1.48	2.40	-1.48	GLOR UNTF	DL 0 3
1391	LOAD 2	20	24	0.00	-1.48	2.50	-1.48	GLOR UNTF	DL 0 3
1392	LOAD 2	18	21	0.00	-1.48	2.40	-1.48	GLOR UNTF	DL 0 3
1393	LOAD 7	21	26	0.00	-1.48	2.50	-1.48	GLOR UNTF	DL 0 3
1394	LOAD 7	28	31	0.00	-1.48	2.40	-1.48	GLOR UNTF	DL 0 3
1395	LOAD 2	31	34	0.00	-1.48	2.50	-1.48	GLOR UNTF	DL 0 3
1396	LOAD 2	29	32	0.00	-1.48	2.40	-1.48	GLOR UNTF	DL 0 3
1397	LOAD 2	32	36	0.00	-1.48	2.50	-1.48	GLOR UNTF	DL 0 3
1398	LOAD 2	30	33	0.00	-1.48	2.40	-1.48	GLOR UNTF	DL 0 3
1399	LOAD 2	33	34	0.00	-1.48	2.50	-1.48	GLOR UNTF	DL 0 3
1400	LOAD 7	43	46	0.00	-1.48	2.40	-1.48	GLOR UNTF	DL 0 3
1401	LOAD 7	46	49	0.00	-1.48	2.50	-1.48	GLOR UNTF	DL 0 3
1402	LOAD 2	44	47	0.00	-1.48	2.40	-1.48	GLOR UNTF	DL 0 3
1403	LOAD 2	47	51	0.00	-1.48	2.50	-1.48	GLOR UNTF	DL 0 3
1404	LOAD 2	45	48	0.00	-1.48	2.40	-1.48	GLOR UNTF	DL 0 3
1405	LOAD 2	48	53	0.00	-1.48	2.50	-1.48	GLOR UNTF	DL 0 3
1406	LOAD 2	55	58	0.00	-0.403	25.00	-0.403	GLOR UNTF	DL 0 3
1407	LOAD 2	55	58	25.00	-0.403	5.50	-0.403	GLOR UNTF	DL 0 3
1408	LOAD 2	58	61	0.00	-0.403	15.00	-0.403	GLOR UNTF	DL 0 3
1409	LOAD 2	61	71	0.00	-0.403	15.00	-0.403	GLOR UNTF	DL 0 3
1410	LOAD 2	58	59	0.00	-0.403	23.00	-0.403	GLOR UNTF	DL 0 3
1411	LOAD 2	56	59	23.00	-0.403	5.50	-0.403	GLOR UNTF	DL 0 3
1412	LOAD 2	59	64	0.00	-0.403	15.00	-0.403	GLOR UNTF	DL 0 3
1413	LOAD 2	64	72	0.00	-0.403	15.00	-0.403	GLOR UNTF	DL 0 3
1414	LOAD 2	57	60	0.00	-0.403	23.00	-0.403	GLOR UNTF	DL 0 3
1415	LOAD 2	57	60	23.00	-0.403	5.50	-0.403	GLOR UNTF	DL 0 3
1416	LOAD 2	60	70	0.00	-0.403	9.00	-0.403	GLOR UNTF	DL 0 3
1417	LOAD 2	70	67	0.00	-0.403	4.00	-0.403	GLOR UNTF	DL 0 3
1418	LOAD 2	67	76	0.00	-0.403	4.00	-0.403	GLOR UNTF	DL 0 3
1419	LOAD 2	78	75	0.00	-0.403	11.00	-0.403	GLOR UNTF	DL 0 3
1420	LOAD 2	58	59	1.71	-0.65	25.58	-0.65	GLOR UNTF	DL 0 3
1421	LOAD 2	59	60	1.71	-0.65	25.58	-0.65	GLOR UNTF	DL 0 3



REPTILE AMPHIB STRUCTURE -- U.S. NAVY (36-1). DIAMETER DYLING -- C. CHERN

[illegible]

1471	LOAD	Z	61	71	15	-793	GLOH	PMKC	ADD	DFAD
1472	LOAD	Z	64	72	15	-793	GLOH	PMKC	ADD	DFAD
1473	LOAD	Z	76	75	15	-793	GLOH	PMKC	ADD	DFAD
1474	LOADCM		6							
1475	LOAD	Z	61	62		-86	GLOH	UNTF	LIVE	IDS
1476	LOAD	Z	62	63		-86	GLOH	UNTF	LIVE	IDS
1477	LOAD	Z	63	64		-86	GLOH	UNTF	LIVE	IDS
1478	LOAD	Z	64	65		-86	GLOH	UNTF	LIVE	IDS
1479	LOAD	Z	65	67		-86	GLOH	UNTF	LIVE	IDS
1480	LOAD	Z	67	69		-86	GLOH	UNTF	LIVE	IDS
1481	LOAD	Z	69	61		-86	GLOH	UNTF	LIVE	IDS
1482	LOAD	Z	61	71	15	-4083	GLOH	CMNC	LIVE	IDS
1483	LOAD	Z	64	72	15	-4083	GLOH	CMNC	LIVE	IDS
1484	LOAD	Z	74	75	15	-4083	GLOH	CMNC	LIVE	IDS

[illegible]

100

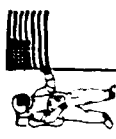
100.	4	100.
100.	4	100.

2 100.

ΣΠΜΑ	7	100
ΣΠΜΑ	8	100
ΣΠΜΑ	9	100

1485
1486

8895
END



STATION - JUTY DEFLECTIONS AND ROTATIONS

PAGE 1
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LOAD CONDITION NO. 1 5-PILE ACAR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

/---REMARKS---/

JOINT NUMBER /-----DEFLECTION IN INCHES-----/ /-----ROTATION IN RADIANS-----/ /

	X	Z	X	Z	
1	0.00000	0.00000	0.00000	0.00000	-.00079
2	0.00000	0.00000	0.00000	0.00000	-.00043
3	0.00000	0.00000	0.00000	0.00000	-.00065
4	-.05329	.51334	-.01894	-.00344	-.00077
5	-.03533	.52816	-.00871	-.00415	-.00045
6	-.04145	.34606	-.03331	-.00431	-.00065
7	-.06415	.55424	-.23043	-.00262	-.00063
8	-.43822	.24750	.52287	-.00297	-.00021
9	-.07180	.55101	-.45044	-.00224	-.00003
10	-.03433	.35729	.15196	-.00262	-.00063
11	-.00151	.44294	.51612	-.00324	-.00034
12	-.06699	.30040	.43344	-.00297	-.00021
13	-.03522	.41510	-.23492	-.00239	-.00027
14	-.05779	.35617	-.74328	-.00224	-.00003
15	-.02154	.44754	-.09163	-.00224	-.00062
16	-.29041	.136297	-.00161	-.00220	-.00053
17	-.24264	.144661	-.02342	-.00223	-.00051
18	-.24229	.130623	.09657	-.00247	-.00055
19	-.73731	.137886	.17583	-.00257	-.00033
20	-.75246	.142675	.40551	-.00264	-.00045
21	-.01751	.131360	-.71756	-.00314	-.00114
22	-.71554	.137796	-.09876	-.00257	-.00073
23	-.74542	.136513	.22114	-.00196	-.00039
24	-.77506	.142598	.52635	-.00264	-.00045
25	-.77783	.134196	-.13244	-.00137	-.00014
26	-.09962	.132124	-.42184	-.00319	-.00014
27	-.76976	.137423	-.22420	-.00125	-.00074
28	-.40823	.227734	-.11675	-.00175	-.00045
29	-.41704	.229644	-.00165	-.00150	-.00027
30	-.44444	.244937	-.25768	-.00164	-.00024
31	-.61276	.228483	.00465	-.00102	-.00043
32	-.56957	.229104	.18495	-.00131	-.00055
33	-.82109	.243271	-.70191	-.00015	-.00083
34	-.59896	.228783	-.00611	-.00142	-.00043
35	-.59890	.235953	.06684	-.00160	-.00023
36	-.58712	.229199	.10974	-.00131	-.00055
37	-.61524	.233308	-.23096	-.00166	-.00052
38	-.80310	.241515	.69756	-.00015	-.00083
39	-.59943	.237249	-.31712	-.00143	-.00024
40	-.51042	.235343	-.02431	-.00163	-.00050
41	-.50924	.231677	.10244	-.00146	-.00047
42	-.60023	.240524	-.64627	-.00094	-.00099
43	-.38555	.309363	-.11367	-.00340	-.00032
44	-.43480	.304194	-.00594	-.00367	-.00020
45	-.31630	.294582	.15463	-.00392	-.00034
46	-.40521	.309401	.01520	-.00384	-.00045
47	-.42064	.304224	.13092	-.00373	-.00031
48	-.54010	.294996	-.51399	-.00415	-.00059



STEEL JOINT DEFLECTIONS AND ROTATIONS

LOAD CONDITION NO. 1

SPTLE ACW STRUCTURE -- U.S. NAVY (3-1/2" DIA. PILING) -- C. CHERN

PAGE 2
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JOINT NUMBER /-----X-----/ /-----Y-----/ /-----Z-----/ /-----REMARKS-----/

	X	Y	Z	X	Y	Z	
40	-59126	3.09350	-10064	-00584	.00045	-.00047	
50	-01281	3.03320	-00700	-00160	.00031	.00015	
51	-03577	3.04190	.01900	-00373	.00031	.00051	
52	-00200	3.03425	-.07548	.00043	-.00045	-.00045	
53	-32251	2.99427	-.14962	-.00015	.00059	.00059	
54	-19670	3.02245	-.15053	.00030	.00147	-.00016	
55	-36530	3.32410	-.12579	-.00467	.00037	-.00051	
56	-42260	3.27200	-.01165	-.00458	.00031	.00056	
57	-29003	3.23364	-.13143	-.00400	.00042	.00056	
58	-27433	5.04007	.11441	.00511	.00036	.00144	
59	-26202	4.99027	-.00347	-.00304	.00030	.00156	
60	-20643	5.02591	-.14587	-.00299	.00023	.00026	
61	-20049	5.33761	-.11840	-.00075	.00039	-.00159	
62	-20397	5.35441	-.09412	-.00048	.00038	.00039	
63	-21967	5.35489	-.01519	-.00054	.00030	.00109	
64	-22317	5.27942	.00035	-.00081	.00027	.00161	
65	-32843	5.35506	-.05852	.00037	.00009	.00046	
66	-15944	5.35495	-.11648	-.00036	.00021	.00102	
67	-15936	5.24675	-.14041	-.00064	.00021	.00031	
68	-15953	5.33290	-.17444	-.00028	.00026	.00028	
69	-17107	5.33293	-.13624	.00031	.00054	.00060	
70	-14750	5.18412	-.14745	-.00151	.00028	.00028	
71	-14195	5.44790	-.11479	-.00053	.00029	.00158	
72	-14751	5.42603	.00030	-.00041	.00049	.00160	
73	-14195	5.39104	-.12431	-.00053	.00029	.00158	
74	-14751	5.36916	.01411	-.00041	.00049	.00160	
75	-13683	5.42647	-.14943	-.00042	.00049	.00030	
76	-15060	5.32119	-.14983	-.00075	.00015	.00031	
77	-13661	5.44792	-.16443	-.00007	.00011	.00043	
78	-13707	5.42608	-.13258	-.00034	.00010	.00039	
79	-13661	5.46335	-.17290	-.00007	.00011	.00043	
80	-13707	5.44039	-.12894	-.00034	.00010	.00039	
81	-23673	5.44790	-.08473	-.00053	.00029	.00158	
82	-05173	5.42603	.00915	-.00081	.00009	.00160	
83	-16232	5.44792	-.17299	-.00007	.00011	.00043	
84	-11390	5.42608	-.15315	-.00034	.00010	.00039	



STRAIN - JOINT DEFLECTIONS AND ROTATIONS

PAGE 3
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LOAD CONDITION NO. 2

3-PILE ACME STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- CACHERN

REMARKS ---/

ROTATION IN RADIANS

DEFLECTION IN INCHES

JOINT NUMBER

Y

X

Y

X

Y

X

JOINT NUMBER	Y	X	DEFLECTION IN INCHES	ROTATION IN RADIANS	REMARKS
1	0.00000	0.00000	0.00000	0.00000	
2	0.00000	0.00000	0.00000	0.00000	
3	0.00000	0.00000	0.00000	0.00000	
4	0.00000	0.00000	0.00000	0.00000	
5	0.00000	0.00000	0.00000	0.00000	
6	0.00000	0.00000	0.00000	0.00000	
7	0.00000	0.00000	0.00000	0.00000	
8	0.00000	0.00000	0.00000	0.00000	
9	0.00000	0.00000	0.00000	0.00000	
10	0.00000	0.00000	0.00000	0.00000	
11	0.00000	0.00000	0.00000	0.00000	
12	0.00000	0.00000	0.00000	0.00000	
13	0.00000	0.00000	0.00000	0.00000	
14	0.00000	0.00000	0.00000	0.00000	
15	0.00000	0.00000	0.00000	0.00000	
16	0.00000	0.00000	0.00000	0.00000	
17	0.00000	0.00000	0.00000	0.00000	
18	0.00000	0.00000	0.00000	0.00000	
19	0.00000	0.00000	0.00000	0.00000	
20	0.00000	0.00000	0.00000	0.00000	
21	0.00000	0.00000	0.00000	0.00000	
22	0.00000	0.00000	0.00000	0.00000	
23	0.00000	0.00000	0.00000	0.00000	
24	0.00000	0.00000	0.00000	0.00000	
25	0.00000	0.00000	0.00000	0.00000	
26	0.00000	0.00000	0.00000	0.00000	
27	0.00000	0.00000	0.00000	0.00000	
28	0.00000	0.00000	0.00000	0.00000	
29	0.00000	0.00000	0.00000	0.00000	
30	0.00000	0.00000	0.00000	0.00000	
31	0.00000	0.00000	0.00000	0.00000	
32	0.00000	0.00000	0.00000	0.00000	
33	0.00000	0.00000	0.00000	0.00000	
34	0.00000	0.00000	0.00000	0.00000	
35	0.00000	0.00000	0.00000	0.00000	
36	0.00000	0.00000	0.00000	0.00000	
37	0.00000	0.00000	0.00000	0.00000	
38	0.00000	0.00000	0.00000	0.00000	
39	0.00000	0.00000	0.00000	0.00000	
40	0.00000	0.00000	0.00000	0.00000	
41	0.00000	0.00000	0.00000	0.00000	
42	0.00000	0.00000	0.00000	0.00000	
43	0.00000	0.00000	0.00000	0.00000	
44	0.00000	0.00000	0.00000	0.00000	
45	0.00000	0.00000	0.00000	0.00000	
46	0.00000	0.00000	0.00000	0.00000	
47	0.00000	0.00000	0.00000	0.00000	
48	0.00000	0.00000	0.00000	0.00000	



STRAIN • JUNCTION DEFLECTIONS AND ROTATIONS

LOAD CONDITION NO. 2

3-PILE ACW STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

PAGE 4
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JOINT /-----DEFLECTION IN INCHES-----/ /-----ROTATION IN RADIANS-----/ /-----MARKS-----/

NUMER X

Y

Z

X

Y

Z

49	.25593	-3.09171	.01171	.00388	-.00037	.00054
50	.27796	-3.03876	.00706	.00170	-.00020	-.00010
51	.30140	-3.05701	.00034	.00377	-.00023	-.00046
52	.25964	-3.04399	.00579	.00045	.00096	.00051
53	.17215	-2.99864	.19685	.00418	-.00054	-.00052
54	.25430	-3.02387	.14221	-.00029	-.00158	.00019
55	.23359	-3.32937	.10753	.00471	-.00031	.00059
56	.29211	-3.28465	.03012	.00460	-.00025	-.00051
57	.14257	-3.23984	.13232	.00494	-.00039	-.00049
58	.16983	-5.05454	.10053	.00313	-.00027	.00153
59	.15720	-5.03620	.02234	.00314	-.00021	-.00152
60	.07301	-5.05627	.10706	.00306	-.00017	-.00019
61	.11448	-5.35314	.10054	.00076	-.00020	.00168
62	.11791	-5.35926	.08551	.00048	-.00027	-.00019
63	.13338	-5.40720	.02818	.00054	-.00020	.00112
64	.13682	-5.33110	.01442	.00083	-.00016	-.00156
65	.24230	-5.40743	.07283	.00040	-.00006	-.00040
66	.04031	-5.40755	.12774	.00019	-.00022	.00095
67	.04022	-5.32253	.15105	.00068	-.00013	-.00025
68	.04022	-5.35806	.16081	.00013	-.00017	.00006
69	.06995	-5.35780	.12460	.00035	-.00052	.00015
70	.05925	-5.21851	.14865	.00155	-.00020	-.00022
71	.07450	-5.46343	.10052	.00053	-.00019	.00166
72	.08015	-5.48174	.01839	.00083	-.00039	.00155
73	.07450	-5.40358	.10734	.00054	-.00019	.00166
74	.08015	-5.42608	.00445	.00083	-.00039	.00155
75	.03445	-5.46163	.15106	.00082	-.00001	-.00024
76	.03587	-5.35681	.15106	.00074	.00008	.00025
77	.03424	-5.46348	.15368	.00008	-.00002	.00029
78	.03471	-5.48157	.15020	.00033	.00001	.00153
79	.03424	-5.47394	.15003	.00008	-.00002	.00029
80	.03471	-5.50008	.14998	.00033	-.00001	.00153
81	.17034	-5.46343	.06448	.00033	-.00001	.00153
82	.01263	-5.48174	.03163	.00083	-.00039	.00155
83	.05168	-5.46348	.15838	.00008	-.00002	.00029
84	.00319	-5.48157	.17017	.00033	-.00001	.00053



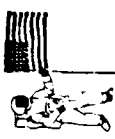
STATION - JUTY DEFLECTIONS AND ROTATIONS

LOAD CONDITION NO. 3

SOPILE ACW STRUCTURE - U.S. NAVY (30-IN. DIAMETER PILING) - C.CHERN

JOINT NUMBER / DEFLECTION IN INCHES / ROTATION IN RADIANS / REMARKS

JOINT NUMBER	X	Y	Z	X	Y	Z	REMARKS
1	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
2	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
3	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
4	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
5	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
6	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
7	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
8	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
9	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
10	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
11	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
12	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
13	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
14	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
15	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
16	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
17	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
18	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
19	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
20	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
21	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
22	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
23	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
24	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
25	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
26	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
27	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
28	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
29	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
30	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
31	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
32	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
33	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
34	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
35	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
36	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
37	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
38	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
39	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
40	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
41	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
42	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
43	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
44	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
45	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
46	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
47	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	
48	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	



STRAN - JOINT DEFLECTIONS AND ROTATIONS

LOAD CONDITION NO. 3

PAGE 6
DATE 04/27/76

SAMPLE ACW STRUCTURE -- U.S. NAVY (66-11, UTAFTER PILING) -- C. CHERN

JOINT NUMBER /-----DEFLECTION IN INCHES-----/ /-----ROTATION IN RADIANS-----/ /-----REMARKS-----/

Z

Y

X

49	.02465	.05732	-.03560	-.00002	-.00002	-.00003
50	.02669	.05721	-.00011	-.00002	-.00002	-.00002
51	.04694	.04616	-.00005	-.00004	-.00004	-.00002
52	.02970	.06136	-.00003	-.00004	-.00003	-.00003
53	.03007	.05608	-.00005	-.00007	-.00006	-.00006
54	.02971	.05805	-.00005	-.00008	-.00002	-.00002
55	.02431	.06494	-.00002	-.00002	-.00003	-.00003
56	.02637	.05882	-.00005	-.00006	-.00001	-.00001
57	.03172	.05761	-.00004	-.00007	-.00004	-.00004
58	.01878	.07122	-.00006	-.00003	-.00004	-.00004
59	.01762	.08438	-.00005	-.00001	-.00002	-.00002
60	.02954	.07762	-.00004	-.00002	-.00003	-.00003
61	.01402	.08218	-.00007	-.00003	-.00004	-.00004
62	.01407	.08449	-.00012	-.00009	-.00004	-.00004
63	.01431	.09280	-.00012	-.00004	-.00004	-.00004
64	.01436	.09472	-.00007	-.00002	-.00003	-.00003
65	.01763	.09279	-.00016	-.00003	-.00004	-.00004
66	.02488	.09276	-.00015	-.00002	-.00009	-.00009
67	.02510	.08860	-.00006	-.00002	-.00002	-.00002
68	.02533	.08450	-.00016	-.00007	-.00061	-.00061
69	.01780	.08450	-.00016	-.00002	-.00005	-.00005
70	.02776	.08201	-.00006	-.00003	-.00002	-.00002
71	.00952	.09058	-.00007	-.00003	-.00004	-.00004
72	.00986	.10732	-.00007	-.00002	-.00003	-.00003
73	.00952	.09326	-.00007	-.00003	-.00004	-.00004
74	.00986	.10824	-.00007	-.00002	-.00003	-.00003
75	.02082	.10006	-.00007	-.00002	-.00002	-.00002
76	.02398	.09148	-.00006	-.00002	-.00002	-.00002
77	.02158	.09459	-.00001	-.00003	-.00002	-.00002
78	.02004	.10729	-.00000	-.00002	-.00009	-.00009
79	.02158	.09388	-.00001	-.00003	-.00002	-.00002
80	.02004	.11039	-.00000	-.00002	-.00009	-.00009
81	.00732	.09458	-.00007	-.00003	-.00004	-.00004
82	.00833	.10732	-.00007	-.00002	-.00003	-.00003
83	.02277	.09459	-.00000	-.00003	-.00002	-.00002
84	.02524	.10729	-.00001	-.00002	-.00009	-.00009



STATION - 101 T E L E C T R I C S A N D R O T A T I O N S

LOAD CONDITION NO. 4

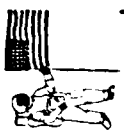
PILE ACW STRUCTURE -- P.S. NAVY (SAFTN. AFTER PILING) -- C.C.M.F.R.

REMARKS --- /

JOINT / DEFLECTION IN INCHES --- / ROTATION IN RADIANS --- /

NUMBER X Y Z X Y Z

1	0.00000	0.00000	0.00000	-0.00070	-0.00001	-0.00001
2	0.00000	0.00000	0.00000	-0.00003	-0.00004	-0.00005
3	0.00000	0.00000	0.00000	-0.00002	-0.00003	-0.00004
4	-0.00077	0.05173	-0.01163	-0.00000	-0.00000	-0.00002
5	0.00302	0.05709	-0.02335	-0.00000	-0.00003	-0.00006
6	0.00253	0.05707	0.04522	-0.00077	0.00003	0.00006
7	0.01381	0.05151	0.07825	-0.00072	0.00004	0.00002
8	0.02140	0.05913	0.08010	-0.00009	-0.00004	-0.00006
9	0.02231	0.05780	-0.18377	-0.00004	-0.00009	-0.00006
10	0.01325	0.05192	0.08345	-0.00000	0.00004	0.00002
11	0.01837	0.06061	0.06061	-0.00000	-0.00001	-0.00001
12	0.02321	0.05952	0.06249	-0.00000	-0.00004	-0.00006
13	0.02161	0.07112	-0.06514	-0.00039	-0.00007	-0.00001
14	0.02394	0.05856	-0.16479	-0.00000	-0.00009	-0.00005
15	0.02121	0.06785	-0.06670	-0.00035	-0.00000	-0.00002
16	0.00364	0.25054	-0.00691	-0.00051	0.00004	0.00006
17	0.01119	0.28110	-0.11147	-0.00053	-0.00001	-0.00012
18	0.01694	0.24584	0.1476	-0.00057	0.00003	0.00008
19	0.02474	0.20961	0.06499	-0.00055	-0.00000	-0.00006
20	0.01071	0.28097	0.06247	-0.00057	-0.00001	-0.00012
21	-0.00306	0.24756	-0.15750	-0.00060	-0.00005	-0.00004
22	0.02300	0.24945	0.04834	-0.00054	-0.00000	-0.00006
23	0.01853	0.25581	0.05087	-0.00043	-0.00001	-0.00005
24	0.01413	0.24084	0.05533	-0.00057	-0.00001	-0.00011
25	0.02044	0.25708	-0.04177	-0.00031	-0.00012	-0.00000
26	0.00041	0.24930	-0.13691	-0.00069	-0.00005	-0.00007
27	0.02032	0.25470	-0.03597	-0.00029	-0.00008	-0.00002
28	0.01863	0.45905	0.00739	-0.00049	-0.00005	-0.00014
29	0.01055	0.47527	-0.01275	-0.00043	-0.00002	-0.00021
30	0.02113	0.50096	-0.06450	-0.00040	0.00003	0.00011
31	0.01984	0.00000	0.0911	-0.00038	-0.00003	-0.00014
32	0.01262	0.47552	0.26445	-0.00045	-0.00002	-0.00021
33	-0.01091	0.50129	-0.16133	-0.00007	0.00004	0.00011
34	0.01561	0.46026	0.02469	-0.00048	-0.00003	-0.00014
35	0.01791	0.48239	0.02042	-0.00045	-0.00004	-0.00012
36	0.01895	0.47569	0.01300	-0.00045	-0.00002	-0.00021
37	0.01953	0.46162	-0.07190	-0.00039	-0.00001	-0.00006
38	0.00760	0.49747	-0.15919	-0.00007	-0.00004	-0.00011
39	0.02205	0.44217	-0.04441	-0.00042	-0.00000	-0.00006
40	0.02094	0.53699	0.01555	-0.00051	-0.00004	-0.00019
41	0.01643	0.50413	0.04439	-0.00046	-0.00003	-0.00025
42	0.01723	0.50084	-0.14629	-0.00024	-0.00011	-0.00011
43	0.02439	0.00000	-0.07441	-0.00046	-0.00005	-0.00020
44	0.01562	0.65476	-0.01554	-0.00044	-0.00002	-0.00026
45	0.05207	0.03269	-0.03757	-0.00045	-0.00004	-0.00007
46	0.03455	0.60040	0.02031	-0.00044	-0.00005	-0.00020
47	0.00712	0.65650	-0.01565	-0.00082	-0.00002	-0.00025
48	0.04929	0.63327	-0.07144	-0.00090	-0.00006	-0.00007



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DATE 04/27/76

STWAN - JOINT DEFLECTIONS AND ROTATIONS

LOAD CONDITION NO. 4

SAMPLE ACOR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- CACHERA

JOINT /-----DEFLECTION IN INCHES-----/ /-----ROTATION IN RADIANS-----/ /-----REMARKS-----/
NUMBER X Y Z Y Z

49	.02852	.66019	-.00494	-.00040	.00005	.00020
50	.02176	.64344	.00103	-.00038	-.00003	.00001
51	.01469	.65651	-.01041	-.00042	-.00002	.00025
52	.02893	.64769	-.02504	.00004	.00027	.00010
53	.05146	.63407	-.04445	-.00090	.00006	.00007
54	.02863	.64047	-.02574	.00004	.00024	.00008
55	.03019	.71011	-.01047	-.00104	.00004	.00020
56	.01470	.70475	-.01679	-.00103	-.00001	.00025
57	.05482	.68533	-.03191	-.00105	.00004	.00007
58	.02459	1.14777	-.00927	-.00070	.00002	.00016
59	.02419	1.14564	-.01506	-.00069	.00002	.00020
60	.04721	1.13910	-.03524	-.00081	.00005	.00004
61	.02174	1.21246	-.00927	-.00017	.00002	.00017
62	.02101	1.19495	-.01011	-.00011	.00001	.00024
63	.01761	1.20052	-.01272	-.00012	.00002	.00002
64	.01484	1.20844	-.01419	-.00016	.00003	.00019
65	.02176	1.20671	-.02246	-.00010	-.00004	.00003
66	.03667	1.20671	-.04305	-.00012	.00005	.00003
67	.03669	1.20583	-.03604	-.00016	.00007	.00003
68	.03664	1.19664	-.02817	-.00006	.00006	.00014
69	.00224	1.19667	-.01904	-.00007	.00002	.00011
70	.04337	1.18077	-.03557	-.00039	.00005	.00003
71	.01673	1.23466	-.00927	-.00013	.00003	.00016
72	.01574	1.23730	-.01414	-.00017	.00001	.00019
73	.01673	1.24454	-.00416	-.00013	.00003	.00016
74	.01574	1.24399	-.01590	-.00017	.00001	.00019
75	.02059	1.23605	-.03604	-.00014	.00010	.00003
76	.03292	1.21342	-.03604	-.00017	.00004	.00003
77	.02064	1.23464	-.02002	-.00002	.00004	.00006
78	.02057	1.23727	-.05245	-.00012	.00009	.00003
79	.02064	1.24077	-.01674	-.00002	.00004	.00006
80	.02057	1.23840	-.05542	-.00012	.00004	.00003
81	.02660	1.23466	-.00141	-.00013	.00003	.00016
82	.00463	1.23730	-.00375	-.00017	.00001	.00019
83	.01709	1.23464	-.02100	-.00002	.00004	.00006
84	.02245	1.23727	-.05947	-.00012	.00009	.00003



SYSTEMS • JOURNAL OF REFLECTIONS AND ROTATIONS

BOPTLE ACME STRUTTER - U.S. NAVY (36-17) - C.CHEEN

JOINT	DEFLECTION IN INCHES	ROTATION IN RADIANS	REMARKS
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STRAP - JOINT DEFLECTIONS AND ROTATIONS

LOAD CONDITION NO. 5

3-PT. ACME STRUCTURE - U.S. NAVY (36-IN. DIAMETER PILING) - C.C. CHEN

JOINT / DEFLECTION IN INCHES - / ROTATION IN RADIAN - / REMARKS - /

JOINT NUMBER	X	Y	Z	X	Y	Z	REMARKS
49	.00104	.00453	-.00523	-.00001	-.00001	.00000	
50	.00122	.00394	-.00394	-.00001	-.00000	.00000	
51	.00130	.00419	-.00354	-.00000	-.00001	.00000	
52	.00084	.00377	-.00509	-.00001	-.00000	.00000	
53	.00014	.00344	-.00554	-.00001	-.00000	.00001	
54	.00084	.00417	-.00509	-.00001	-.00000	.00000	
55	.00069	.00482	-.00533	-.00001	-.00001	.00000	
56	.00170	.00426	-.00359	-.00000	-.00001	.00000	
57	.00019	.00294	-.00564	-.00001	-.00000	.00001	
58	.00115	.00564	-.00415	-.00000	-.00000	.00000	
59	.00109	.00403	-.00445	-.00000	-.00000	.00000	
60	.00032	.00479	-.00644	-.00001	-.00000	.00001	
61	.00109	.00634	-.00364	-.00001	-.00001	.00000	
62	.00104	.00683	-.00764	-.00005	-.00007	.00001	
63	.00104	.00514	-.00724	-.00001	-.00000	.00000	
64	.00103	.00492	-.00489	-.00001	-.00000	.00000	
65	.00069	.00514	-.01313	-.00003	.00015	.00001	
66	.00078	.00513	-.00700	-.00005	-.00000	.00000	
67	.00077	.00604	-.00492	-.00000	-.00000	.00001	
68	.00077	.00683	-.00634	-.00003	-.00000	.00001	
69	.00084	.00683	-.01075	-.00001	-.00010	.00000	
70	.00050	.00547	-.00686	-.00001	-.00000	.00001	
71	.00084	.00443	-.00444	-.00001	-.00000	.00000	
72	.00097	.00613	-.00525	-.00001	-.00000	.00000	
73	.00084	.00451	-.00494	-.00001	-.00000	.00000	
74	.00097	.00604	-.00534	-.00001	-.00000	.00000	
75	.00115	.00692	-.00724	-.00001	-.00000	.00001	
76	.00084	.00612	-.00702	-.00000	-.00000	.00001	
77	.00115	.00843	-.00684	-.00001	-.00000	.00001	
78	.00115	.00613	-.00734	-.00001	-.00000	.00000	
79	.00115	.00680	-.00654	-.00001	-.00001	.00000	
80	.00115	.00599	-.00734	-.00001	-.00000	.00000	
81	.00097	.00443	-.00452	-.00001	-.00000	.00000	
82	.00105	.00613	-.00491	-.00001	-.00000	.00000	
83	.00176	.00843	-.00699	-.00001	-.00000	.00001	
84	.00139	.00613	-.00784	-.00001	-.00000	.00000	



STRAIN - DEFLECTIONS AND ROTATIONS

LOAD CONDITION NO. 6

SOPILE ACWR STRUCTURE -- U.S. NAV (36-IN. DIAMETER PILING) -- C. CHERN

PAGE 11
DATE 04/27/76

REMARKS --- /

JOINT NUMBER / DEFLECTION IN INCHES / ROTATION IN RADIANS /

	X	Y	Z	X	Y	Z	
1	0.00000	0.00000	0.00000	0.0000	0.0000	0.0000	0.0000
2	0.00000	0.00000	0.00000	0.0000	0.0000	0.0000	0.0000
3	0.00000	0.00000	0.00000	0.0000	0.0000	0.0000	0.0000
4	0.00295	0.0024	0.0033	0.0000	0.0000	0.0000	0.0000
5	0.0167	0.0034	0.0054	0.0000	0.0000	0.0000	0.0000
6	0.0017	0.0028	0.0077	0.0000	0.0000	0.0000	0.0000
7	0.0011	0.0009	0.0076	0.0000	0.0000	0.0000	0.0000
8	0.0008	0.0002	0.0052	0.0000	0.0000	0.0000	0.0000
9	0.0004	0.0002	0.0026	0.0000	0.0000	0.0000	0.0000
10	0.0018	0.0050	0.0160	0.0000	0.0000	0.0000	0.0000
11	0.0018	0.0017	0.0159	0.0000	0.0000	0.0000	0.0000
12	0.0017	0.0002	0.0159	0.0000	0.0000	0.0000	0.0000
13	0.0082	0.0009	0.0257	0.0000	0.0000	0.0000	0.0000
14	0.0136	0.0024	0.0219	0.0000	0.0000	0.0000	0.0000
15	0.0000	0.0014	0.0146	0.0000	0.0000	0.0000	0.0000
16	0.0132	0.0061	0.0315	0.0000	0.0000	0.0000	0.0000
17	0.0054	0.0079	0.0061	0.0000	0.0000	0.0000	0.0000
18	0.0074	0.0267	0.0017	0.0000	0.0000	0.0000	0.0000
19	0.0098	0.0477	0.0072	0.0000	0.0000	0.0000	0.0000
20	0.0015	0.0029	0.0154	0.0000	0.0000	0.0000	0.0000
21	0.0050	0.0290	0.0291	0.0000	0.0000	0.0000	0.0000
22	0.0012	0.0076	0.0154	0.0000	0.0000	0.0000	0.0000
23	0.0066	0.0509	0.0156	0.0000	0.0000	0.0000	0.0000
24	0.0020	0.0028	0.0156	0.0000	0.0000	0.0000	0.0000
25	0.0017	0.0054	0.0190	0.0000	0.0000	0.0000	0.0000
26	0.0075	0.0333	0.0133	0.0000	0.0000	0.0000	0.0000
27	0.0020	0.0074	0.0159	0.0000	0.0000	0.0000	0.0000
28	0.0155	0.0151	0.0053	0.0000	0.0000	0.0000	0.0000
29	0.0182	0.0204	0.0170	0.0000	0.0000	0.0000	0.0000
30	0.0064	0.0158	0.0112	0.0000	0.0000	0.0000	0.0000
31	0.0028	0.0174	0.0171	0.0000	0.0000	0.0000	0.0000
32	0.0058	0.0234	0.0166	0.0000	0.0000	0.0000	0.0000
33	0.0015	0.0308	0.0256	0.0000	0.0000	0.0000	0.0000
34	0.0037	0.0175	0.0163	0.0000	0.0000	0.0000	0.0000
35	0.0034	0.0208	0.0159	0.0000	0.0000	0.0000	0.0000
36	0.0070	0.0251	0.0142	0.0000	0.0000	0.0000	0.0000
37	0.0070	0.0204	0.0204	0.0000	0.0000	0.0000	0.0000
38	0.0070	0.0316	0.0202	0.0000	0.0000	0.0000	0.0000
39	0.0068	0.0252	0.0205	0.0000	0.0000	0.0000	0.0000
40	0.0073	0.0197	0.0154	0.0000	0.0000	0.0000	0.0000
41	0.0083	0.0236	0.0148	0.0000	0.0000	0.0000	0.0000
42	0.0047	0.0270	0.0239	0.0000	0.0000	0.0000	0.0000
43	0.0009	0.0205	0.0151	0.0000	0.0000	0.0000	0.0000
44	0.0035	0.0224	0.0155	0.0000	0.0000	0.0000	0.0000
45	0.0147	0.0155	0.0204	0.0000	0.0000	0.0000	0.0000
46	0.0043	0.0201	0.0155	0.0000	0.0000	0.0000	0.0000
47	0.0012	0.0220	0.0191	0.0000	0.0000	0.0000	0.0000
48	0.0018	0.0146	0.0245	0.0000	0.0000	0.0000	0.0000

LOAD CONDITION NO. 6 3-PILE ACQU STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

JOINT /-----DEFLECTION IN INCHES-----/ /-----ROTATION IN RADIANS-----/ /-----REMARKS-----/

NUMBER	X	Y	Z	X	Y	Z
49	.00632	.02458	-.01742	-.00003	-.00003	.00000
50	.00728	.02159	-.02161	-.00004	-.00001	.00001
51	.00822	.02276	-.01934	-.00001	.00003	.00000
52	.00546	.02048	-.02773	-.00004	.00002	.00001
53	.00148	.01889	-.03020	-.00006	.00000	.00004
54	.00546	.02264	-.02763	-.00005	.00002	.00002
55	.00437	.02616	-.01783	-.00003	.00003	.00000
56	.00491	.02315	-.01961	-.00001	.00003	.00000
57	.00170	.01505	-.03066	.00005	.00000	.00004
58	.00675	.03047	-.02245	-.00002	.00002	.00001
59	.00628	.02196	-.02424	-.00001	.00002	.00000
60	.00113	.02608	-.03521	-.00006	.00001	.00004
61	.00610	.03745	-.02406	-.00004	.00004	.00001
62	.00605	.03685	-.00497	-.00029	.00004	.00002
63	.00586	.02806	-.04231	-.00054	.00004	.00003
64	.00582	.02700	-.02667	-.00005	.00002	.00001
65	.00412	.02806	-.08041	-.00018	.00005	.00003
66	.00360	.02804	-.03805	.00032	.00000	.00003
67	.00354	.03254	-.03761	.00000	.00001	.00004
68	.00351	.03685	-.03072	.00020	.00003	.00008
69	.00483	.02988	-.06473	.00007	.00067	.00002
70	.00209	.02988	-.05617	.00004	.00001	.00004
71	.00441	.04534	-.02672	.00004	.00000	.00001
72	.00522	.03594	-.02453	.00003	.00002	.00001
73	.00441	.04577	-.02466	.00004	.00000	.00001
74	.00522	.03570	-.02914	.00003	.00002	.00001
75	.00550	.03729	-.03446	.00004	.00001	.00004
76	.00412	.03299	-.03610	.00002	.00001	.00004
77	.00549	.04537	-.03633	.00003	.00002	.00005
78	.00551	.03593	-.03996	.00004	.00000	.00001
79	.00549	.04734	-.03563	.00003	.00002	.00005
80	.00551	.03541	-.04002	.00004	.00000	.00001
81	.00506	.04534	-.02445	.00004	.00000	.00001
82	.00563	.03394	-.02665	.00003	.00002	.00001
83	.00877	.04537	-.03811	.00003	.00002	.00005
84	.00638	.03893	-.04247	.00004	.00000	.00001



STRAIN - JOINT DEFLECTIONS AND ROTATIONS

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LOAD CONDITION NO. 7

3-PILE AC44 STRUCTURE -- U.S. NAVY (30-IN. DIA) PILING) -- C. CHERN

JOINT /-----DEFLECTION IN INCHES-----/ /-----ROTATION IN RADIANS-----/ /-----MARKS-----/

NUMBER

	X	Y	Z	X	Y	Z
1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
4	0.0030	0.0000	0.0000	0.0000	0.0000	0.0000
5	0.0012	0.0000	0.0000	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
16	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
18	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
21	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
22	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
23	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
24	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
26	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
27	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
28	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
29	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
31	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
32	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
33	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
34	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
36	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
37	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
38	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
39	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
40	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
41	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
42	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
43	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
44	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
45	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
46	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
47	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
48	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000



STRAN - JOINT DEFLECTIONS AND ROTATIONS

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LOAD CONDITION NO. 7 3-PILE ACHE STRUCTURE -- U.S. NAVY (16-IN. PLASTER PILING) -- C.C.H.P.R.A.

JOINT /-----DEFLECTION IN INCHES-----/ /-----ROTATION IN RADIANS-----/ /-----REMARKS-----/
NUMBER X Y Z

49	.25311	-3.69025	.00786	.00470	-.00045	.00032
50	.28411	-3.61890	-.05515	.00197	-.00014	-.00014
51	.31679	-3.64240	-.03655	.00454	-.00024	-.00023
52	.26128	-3.62655	.03769	-.00057	.00054	.00054
53	.15091	-3.57314	.17129	.00505	-.00058	-.00052
54	.25626	-3.60212	.09797	-.00034	.00194	.00025
55	.22441	-3.97584	.08120	.00571	-.00035	.00034
56	.30549	-3.92052	.00016	.00562	-.00030	.00024
57	.11966	-3.86482	.10147	.00596	-.00041	.00050
58	.16517	-6.12544	.06834	.00377	.00024	.00135
59	.15193	-6.09347	-.01259	.00377	-.00020	.00134
60	.05506	-6.11297	.11592	.00380	.00014	-.00019
61	.10780	-6.47684	.06719	.00045	-.00030	.00148
62	.11264	-6.46479	.06634	.00045	-.00044	-.00050
63	.13111	-6.51578	-.01359	.00046	-.00006	-.00118
64	.13537	-6.43790	-.01653	.00091	-.00015	-.00140
65	.23886	-6.51622	.02414	.00032	.00022	.00041
66	.02773	-6.51637	.09950	.00050	-.00015	.00089
67	.02786	-6.43377	.11943	.00078	-.00004	-.00026
68	.02810	-6.46341	.13522	.00034	-.00018	.00023
69	.08644	-6.46314	.06016	.00025	-.00066	-.00000
70	.04314	-6.31181	.11728	.00187	-.00014	-.00022
71	.06823	-6.59909	.06655	.00054	-.00018	.00146
72	.07520	-6.60550	-.01914	.00093	.00042	.00138
73	.06823	-6.54640	.07509	.00054	-.00014	.00146
74	.07520	-6.54574	-.03037	.00094	-.00042	-.00134
75	.03353	-6.59109	.11440	.00092	.00004	.00025
76	.02605	-6.47283	.11920	.00084	-.00000	.00025
77	.03404	-6.59910	.10707	.00010	.00004	.00036
78	.03305	-6.60543	.12697	.00044	.00007	.00047
79	.03404	-6.61204	.10564	.00010	.00004	.00036
80	.03305	-6.62251	.12941	.00044	-.00007	.00047
81	.15603	-6.59909	.03141	.00050	-.00014	.00146
82	.00788	-6.60559	-.07516	.00093	-.00042	-.00138
83	.05560	-6.59910	.11255	.00009	.00004	.00036
84	.00459	-6.60543	.15305	.00045	.00007	.00047



STIMAN - JETTY EFFECTIONS AND ROTATIONS

LOAD CONDITION NO. A 3-PILE ACME STRUCTURE -- (S. NAVY (36-IN. DIAMETER PILING)) -- C. CHERN

JOINT /-----DEFLECTION IN INCHES-----/ /-----ROTATION IN RADIANS-----/ /-----REMARKS-----/
NUMBER X Y Z X Y Z

1	0.00000	0.00000	0.00000	-.00511	-.00105	-.00000
2	0.00000	0.00000	0.00000	-.00543	-.00005	-.00092
3	0.00000	0.00000	0.00000	-.00574	-.00061	-.00059
4	-.07201	-.36560	-.02569	-.00465	-.00103	-.00004
5	-.00734	-.38901	-.01721	-.00498	-.00007	-.00086
6	-.03774	-.40087	-.03453	-.00498	-.00061	-.00059
7	-.09445	-.40315	-.25220	-.00316	-.00066	-.00005
8	-.76299	-.36065	-.53055	-.00361	-.00016	-.00006
9	-.09004	-.40663	-.12627	-.00261	-.00011	-.00059
10	-.06905	-.40657	-.14700	-.00316	-.00060	-.00005
11	-.02774	-.51150	-.31004	-.00394	-.00036	-.00006
12	-.78892	-.36391	-.42615	-.00361	-.00016	-.00006
13	-.05496	-.48720	-.40133	-.00275	-.00021	-.00014
14	-.07256	-.41264	-.16803	-.00261	-.00011	-.00054
15	-.04190	-.51304	-.41031	-.00257	-.00065	-.00012
16	-.07483	-.163672	-.12995	-.00281	-.00056	-.00006
17	-.10064	-.176711	-.07340	-.00290	-.00036	-.00061
18	-.2188	-.156282	-.09511	-.00323	-.00052	-.00074
19	-.06439	-.16452	-.18641	-.00324	-.00023	-.00068
20	-.09371	-.174597	-.40361	-.00302	-.00050	-.00061
21	-.07637	-.157310	-.07071	-.00399	-.00004	-.00075
22	-.06374	-.164743	-.08746	-.00324	-.00023	-.00070
23	-.07811	-.164174	-.10443	-.00266	-.00036	-.00015
24	-.71224	-.174303	-.30114	-.00342	-.00050	-.00062
25	-.70562	-.162142	-.35823	-.00161	-.00017	-.00002
26	-.05381	-.158381	-.05489	-.00390	-.00004	-.00076
27	-.09759	-.160791	-.43117	-.00106	-.00009	-.00024
28	-.03903	-.280489	-.17101	-.00232	-.00012	-.00034
29	-.08973	-.285903	-.07262	-.00200	-.00047	-.00034
30	-.41936	-.305653	-.37532	-.00213	-.00020	-.00083
31	-.04025	-.281060	-.03021	-.00202	-.00042	-.00035
32	-.05105	-.285094	-.14607	-.00181	-.00055	-.00035
33	-.02843	-.303345	-.95717	-.00010	-.00005	-.00083
34	-.03774	-.281180	-.02604	-.00202	-.00042	-.00035
35	-.02486	-.282745	-.07723	-.00266	-.00016	-.00006
36	-.02137	-.285210	-.09181	-.00181	-.00055	-.00037
37	-.04634	-.289879	-.57391	-.00253	-.00082	-.00062
38	-.04034	-.301022	-.95431	-.00010	-.00004	-.00084
39	-.02581	-.294450	-.05275	-.00274	-.00012	-.00026
40	-.04949	-.314846	-.07196	-.00214	-.00052	-.00018
41	-.04736	-.315006	-.03753	-.00193	-.00040	-.00015
42	-.07210	-.298228	-.49064	-.00114	-.00110	-.00094
43	-.03413	-.380092	-.17417	-.00471	-.00042	-.00027
44	-.07204	-.379307	-.07204	-.00056	-.00009	-.00022
45	-.23241	-.369516	-.28704	-.00474	-.00039	-.00074
46	-.33937	-.380099	-.01914	-.00476	-.00044	-.00024
47	-.37583	-.379277	-.07931	-.00460	-.00028	-.00023
48	-.26244	-.370080	-.47402	-.00502	-.00088	-.00077



STRA - JOINT DEFLECTIONS AND ROTATIONS

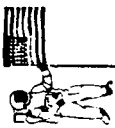
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DATE 09/27/76

LOAD CONDITION NO. A 3-PILE ACME STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- CACHER

JOINT /-----DEFLECTION IN INCHES-----/ /-----ROTATION IN RADIANS-----/ /-----MARKS-----/

NUMBER X Z X Z

49	-33073	5.84038	-1.6188	-0.0076	.00044	-.00029
50	-35596	5.76247	-.00885	-.00022	.00026	.00015
51	-38278	3.70224	-.05881	-.00460	.00028	.00024
52	-33702	3.76756	-.20179	.00043	-.00105	-.00058
53	-23936	3.70679	-.32828	-.00502	.00068	.00077
54	-33202	5.74414	-.27597	.00024	.00184	-.00024
55	-30578	4.12901	-.19247	-.00577	.00039	-.00034
56	-37011	4.07383	-.00319	-.00567	.00027	.00029
57	-20161	3.90547	-.25076	-.10593	.00047	.00074
58	-22370	6.20517	-.19199	-.00389	.00033	-.00130
59	-21204	6.24053	-.09275	-.00383	.00026	.00135
60	-13110	6.27509	-.24270	-.00393	.00014	.00036
61	-15750	6.67702	-.19555	-.00106	.00030	-.00145
62	-16175	6.65943	-.20249	-.00105	.00039	.00064
63	-18085	6.68740	-.12460	-.00141	.00045	.00111
64	-18512	6.61290	-.09164	.00110	.00024	.00141
65	-28423	6.68776	-.23351	-.00043	.00097	.00042
66	-10227	6.68761	-.20888	.00004	.00026	-.00118
67	-10187	6.61973	-.20110	-.00040	.00010	.00040
68	-10159	6.65775	-.30650	.00005	.00010	.00022
69	-14527	6.65778	-.28350	-.00062	.00019	.00008
70	-11895	6.48225	-.28015	-.00201	.00018	.00038
71	-11044	6.83496	-.19801	-.00078	.00024	.00144
72	-11568	6.81152	-.09409	-.00110	.00046	.00139
73	-11044	6.78315	-.23660	-.00078	.00024	.00144
74	-11568	6.76117	-.07765	-.00110	.00046	.00139
75	-10206	6.80710	-.20370	-.00111	.00045	.00059
76	-09873	6.60539	-.20144	-.00100	.00003	.00040
77	-10103	6.83095	-.20142	-.00011	.00003	.00053
78	-10309	6.81110	-.20067	-.00051	.00001	.00049
79	-10103	6.85413	-.20042	.00011	.00003	.00053
80	-10309	6.82857	-.30119	-.00051	.00002	.00049
81	-19674	6.83496	-.15148	-.00177	.00024	-.00124
82	-05209	6.81132	-.02852	-.00109	.00046	.00139
83	-13298	6.83495	-.29893	-.00012	.00003	.00053
84	-07398	6.81110	-.33167	-.00052	.00001	.00049

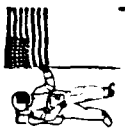


STATION - REACTION FORCES AND MOMENTS

PAGE 1
DATE 04/27/76

LOAD CONDITION NO. 1
PILE ACWR STRUCTURE - U.S. NAVY (36-IN. DIAMETER PILING) - C.M.E.P.A.

JOINT NUMBER	FORCE IN KIPS F _Y	F _Z	M _X	M _Y	M _Z	REMARKS
1	91.6651	-174.3208	-671.7508	0.0000	0.0000	
2	-89.5588	-164.8297	-605.6521	0.0000	0.0000	
3	.7353	-412.0781	1352.0697	0.0000	0.0000	
TOTAL	2.8417	-756.2280	-4.4332	0.0000	0.0000	



STRUCTURE REACTION FORCES AND MOMENTS

PAGE 2
DATE 04/27/76

LOAD CONDITION NO. 2

SAMPLE AREA STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C.C.F.P.

REMARKS

JOINT NUMBER	FORCE IN KIIPS		MOMENT IN KIIPS		REMARKS	
	F-X	F-Y	M-X	M-Y	M-Z	
1	-91.3341	173.4954	670.1794	0.0000	0.0000	
2	90.2140	170.1914	669.0216	0.0000	0.0000	
3	-5.770	412.0347	-1338.5127	0.0000	0.0000	
TOTAL	-1.6971	755.7245	1.1887	0.0000	0.0000	



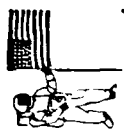
PAGE 3
DATE 04/27/76

LOAD CONDITION NO. 3

3-PIPLF ACME STRUCTURE -- 1.9. NAVY 134-IN. DIAMETER PILING) -- C. CHARN

JOINT NUMBER	FORCE IN KIIPS	DISPLACEMENT IN INCHES	REMARKS
	F=1	F=2	F=3
	F=4	F=5	F=6
	F=7	F=8	F=9
	F=10	F=11	F=12
	F=13	F=14	F=15
	F=16	F=17	F=18
	F=19	F=20	F=21
	F=22	F=23	F=24
	F=25	F=26	F=27
	F=28	F=29	F=30
	F=31	F=32	F=33
	F=34	F=35	F=36
	F=37	F=38	F=39
	F=40	F=41	F=42
	F=43	F=44	F=45
	F=46	F=47	F=48
	F=49	F=50	F=51
	F=52	F=53	F=54
	F=55	F=56	F=57
	F=58	F=59	F=60
	F=61	F=62	F=63
	F=64	F=65	F=66
	F=67	F=68	F=69
	F=70	F=71	F=72
	F=73	F=74	F=75
	F=76	F=77	F=78
	F=79	F=80	F=81
	F=82	F=83	F=84
	F=85	F=86	F=87
	F=88	F=89	F=90
	F=91	F=92	F=93
	F=94	F=95	F=96
	F=97	F=98	F=99
	F=100	F=101	F=102
	F=103	F=104	F=105
	F=106	F=107	F=108
	F=109	F=110	F=111
	F=112	F=113	F=114
	F=115	F=116	F=117
	F=118	F=119	F=120
	F=121	F=122	F=123
	F=124	F=125	F=126
	F=127	F=128	F=129
	F=130	F=131	F=132
	F=133	F=134	F=135
	F=136	F=137	F=138
	F=139	F=140	F=141
	F=142	F=143	F=144
	F=145	F=146	F=147
	F=148	F=149	F=150
	F=151	F=152	F=153
	F=154	F=155	F=156
	F=157	F=158	F=159
	F=160	F=161	F=162
	F=163	F=164	F=165
	F=166	F=167	F=168
	F=169	F=170	F=171
	F=172	F=173	F=174
	F=175	F=176	F=177
	F=178	F=179	F=180
	F=181	F=182	F=183
	F=184	F=185	F=186
	F=187	F=188	F=189
	F=190	F=191	F=192
	F=193	F=194	F=195
	F=196	F=197	F=198
	F=199	F=200	F=201
	F=202	F=203	F=204
	F=205	F=206	F=207
	F=208	F=209	F=210
	F=211	F=212	F=213
	F=214	F=215	F=216
	F=217	F=218	F=219
	F=220	F=221	F=222
	F=223	F=224	F=225
	F=226	F=227	F=228
	F=229	F=230	F=231
	F=232	F=233	F=234
	F=235	F=236	F=237
	F=238	F=239	F=240
	F=241	F=242	F=243
	F=244	F=245	F=246
	F=247	F=248	F=249
	F=250	F=251	F=252
	F=253	F=254	F=255
	F=256	F=257	F=258
	F=259	F=260	F=261
	F=262	F=263	F=264
	F=265	F=266	F=267
	F=268	F=269	F=270
	F=271	F=272	F=273
	F=274	F=275	F=276
	F=277	F=278	F=279
	F=280	F=281	F=282
	F=283	F=284	F=285
	F=286	F=287	F=288
	F=289	F=290	F=291
	F=292	F=293	F=294
	F=295	F=2	

	1	2	3	TOTAL
-16.8422	12.3564			0.0000
16.8417	12.3559			0.0000
.0005	-24.7124			0.0000
		139.7944		0.0000
		140.4115		0.0000
		154.6414		0.0000
		435.8499		0.0000
				0.0000



STRAN - REACTION FORCES AND MOMENTS

PAGE 4
DATE 04/27/76

LOAD CONDITION NO. 4

3-PILE ACME STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

JOINT NUMBER /-----/ FORCE IN KIIPS /-----/ MOMENT IN IN-KIPS /-----/ REMARKS /-----/

	1-X	1-Y	1-Z	1-X	1-Y	1-Z	
1	20.2022	-27.1789	-145.9515	0.0000	0.0000	0.0000	
2	-20.2074	-27.1879	-145.9515	0.0000	0.0000	0.0000	
3	0.0052	-75.2532	291.9051	0.0000	0.0000	0.0000	
TOTAL	0.0000	-129.6000	-0.0000	0.0000	0.0000	0.0000	



STRAP - REACTION FORCES AND MOMENTS

PAGE 5
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LOAD CONDITION NO. 5

3-PILE ACWR STRUCTURE -- U.S. NAVY (34-IN. DIAMETER PILING) -- C. CHERN

REMARKS: /

JOINT / FORCE IN KIPS / / MOMENT IN KIPS / /

NO. X Y Z

1	-1.4087	.8283	9.8075	0.0000	0.0000	0.0000
2	1.4083	.8276	9.8251	0.0000	0.0000	0.0000
3	.0004	-1.6559	9.8141	0.0000	0.0000	0.0000
TOTAL	-0.0000	.0000	29.4447	0.0000	0.0000	0.0000



STRAIN - REACTION FORCES AND MOMENTS

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DATE 04/27/76

LOAD CONDITION NO. 6

SOIL ACWP STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

REMARKS

JOINT NUMBER	F=X	F=Y	F=Z	M=X	M=Y	M=Z
1	-7.6499	4.4972	53.2513	0.0000	0.0000	0.0000
2	7.6485	4.4944	53.3550	0.0000	0.0000	0.0000
3	.0014	4.9920	53.2917	0.0000	0.0000	0.0000
TOTAL	-0.0000	.0000	159.8980	0.0000	0.0000	0.0000



STRAVE - FACTORS FORCES AND MOMENTS

LOAD CONDITION NO. 7

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3-PILE ACWR STRUCTURE -- U.S. NAVY (30-FT. DIAMETER PILING) -- C.CHERN

JOINT NUMBER /-----FORCE IN KIPS-----/ /-----MOMENT IN IN-KIPS-----/ /-----REMARKS-----/

F=V

F=Z

M=Z

1	-129.4272	213.4594	966.0357	0.0000	0.0000	0.0000
2	129.4272	210.5659	965.2077	0.0000	0.0000	0.0000
3	-5.813	460.9032	-1464.7601	0.0000	0.0000	0.0000
TOTAL	-1.6971	885.3285	466.4433	0.0000	0.0000	0.0000



STRAV - REFLECTION FORCES AND MOMENTS

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LOAD CONDITION NO. 8 3011F ACMM STRUCTURE -- U.S. NAVY (30-IN. DIAMETER PILING) -- C.CHERN

JOINT /-----/ FORCE IN KIPS /-----/ /-----/ MOMENT IN IN-KIPS /-----/ /-----/ MARKS /-----/

NUMBER	F _{AX}	F _{AY}	F _{AZ}	M _{AX}	M _{AY}	M _{AZ}
1	85.9265	143.4174	-414.4044	0.0000	0.0000	0.0000
2	-83.8277	-179.3392	-608.0144	0.0000	0.0000	0.0000
3	.7424	-522.6720	1443.6201	0.0000	0.0000	0.0000
TOTAL	2.8417	-465.8286	420.7594	0.0000	0.0000	0.0000



STRAN UNITTY CHECK SUMMARY REPORT

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DATE 04/27/76

3-PILE ACNR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

THREE HIGHEST UNITTY CHECKS G.T. 1.00
/---FIRST HIGHEST---/---SECOND HIGHEST---/---THIRD HIGHEST---/

MEMBER NUMBER	MEMBER GROUP ID	UNITTY CHECK CN.	UNITTY CHECK CN.	UNITTY CHECK CN.	UNITTY CHECK CN.	UNITTY CHECK CN.
67- 69	W18	(42) 1.31	A	1.07	1	3A 7
30- 45	P20	1.50	A	1.35	7	1.17 1
71- 75	W06	1.44	A	.84	1	.24 7
45- 57	P20	1.45	A	1.32	7	1.14 2
26- 38	J11	1.45	A	1.20	7	1.09 2
53- 54	B03	1.50	A	1.27	7	1.07 2
42- 53	J12	1.25	A	1.12	7	.9A 2
38- 42	J12	1.25	A	1.12	7	.9A 2
54- 49	H03	1.24	7	1.17	A	.9A 2
53- 57	J12	1.22	H	1.10	7	.95 2
54- 53	H01	1.19	7	1.03	A	1.00 2
18- 30	P20	1.19	A	.98	7	.87 1
60- 64	H05	1.14	A	1.02	1	.97 7
58- 67	H05	1.13	7	1.01	2	.93 A
30- 33	W00	1.06	B	.87	7	.7A 2
33- 34	W00	1.06	A	.88	7	.7A 2
3- 6	P10	1.00	A	.90	7	.80 1



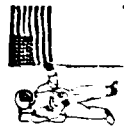
STATUS WEEK STARTS REPORT

PAGE 1
DATE 04/27/76

30PILF ACAR STRUCTURE -- (U.S. NAVY (30PILF) PLASTER PILING) -- C. PHEM

UNIT CHECK COMPONENT VALUES LOAD DIST FROM UNIT CK COMBINED LO

MEMBER NO.	GROUP ID	MAXIMUM UNIT CK	AXIAL	V-AXIS	Z-AXIS	UNIT CK	COMPONENT VALUES	LOAD DIST FROM	UNIT CK	COMBINED LO
1	4 P10-01	.565	.242	.041	.242	7	6.1	6.1	.466	.450
2	5 P10-01	.554	.242	.074	.234	7	6.1	6.1	.455	.451
3	6 P10-01	1.001	.467	.534	.000	4	6.1	6.1	.496	.799
4	7 P10-01	.156	.156	.000	.000	7	2.4	2.4	.154	.137
5	8 P10-01	.563	.234	.091	.233	7	0.0	0.0	.464	.448
6	9 P10-01	.150	.149	.000	.000	7	2.4	2.4	.146	.131
7	10 P10-01	.556	.239	.087	.230	7	0.0	0.0	.453	.439
8	11 P10-01	.270	.269	.000	.001	4	2.4	2.4	.262	.232
9	12 P10-01	.090	.456	.534	.000	8	0.0	0.0	.485	.790
10	13 P10-01	.157	.156	.000	.000	7	2.5	2.5	.154	.137
11	14 P10-01	.150	.150	.000	.000	7	2.5	2.5	.146	.131
12	15 P10-01	.270	.269	.000	.001	4	2.5	2.5	.262	.232
13	16 P10-01	.235	.174	.009	.046	4	29.0	29.0	.235	.219
14	17 P10-01	.490	.346	.133	.011	7	29.0	29.0	.453	.410
15	18 P10-01	.107	.006	.089	.012	4	32.4	32.4	.070	.067
16	19 P10-01	.218	.168	.171	.018	4	29.0	29.0	.214	.211
17	20 P10-01	.214	.169	.171	.018	4	29.0	29.0	.192	.189
18	21 P10-01	.244	.025	.199	.020	7	29.0	29.0	.213	.209
19	22 P10-01	.200	.014	.045	.141	4	40.3	40.3	.147	.147
20	23 P10-01	.461	.325	.131	.005	7	40.3	40.3	.174	.173
21	24 P10-01	.072	.006	.065	.001	4	32.4	32.4	.040	.032
22	25 P10-01	.474	.318	.156	.104	4	29.0	29.0	.403	.401
23	26 P10-01	.193	.050	.050	.092	4	29.0	29.0	.141	.140
24	27 P10-01	.905	.615	.133	.157	7	40.3	40.3	.436	.424
25	28 P10-01	.405	.311	.093	.001	4	0.0	0.0	.342	.340
26	29 P10-01	.249	.004	.234	.002	4	40.3	40.3	.230	.230
27	30 P10-01	.876	.635	.131	.110	7	40.3	40.3	.746	.720
28	31 P10-01	.051	.049	.000	.002	4	2.4	2.4	.047	.042
29	32 P10-01	.493	.350	.054	.107	7	32.4	32.4	.349	.377
30	33 P10-01	.043	.042	.000	.001	4	2.4	2.4	.039	.035
31	34 P10-01	.490	.349	.011	.124	7	32.4	32.4	.394	.373
32	35 P10-01	.880	.679	.100	.001	4	2.4	2.4	.343	.347
33	36 P10-01	1.184	.477	.510	.001	4	32.6	32.6	.977	.872
34	37 P10-01	.051	.149	.000	.002	4	2.5	2.5	.047	.042
35	38 P10-01	.043	.042	.000	.001	4	2.5	2.5	.039	.035
36	39 P10-01	.481	.480	.000	.001	4	2.5	2.5	.342	.346
37	40 P10-01	.424	.161	.037	.124	7	24.4	24.4	.304	.284
38	41 P10-01	.401	.141	.214	.002	7	24.4	24.4	.283	.276
39	42 P10-01	.365	.156	.153	.055	7	32.4	32.4	.296	.290
40	43 P10-01	.346	.104	.054	.205	4	0.0	0.0	.332	.305
41	44 P10-01	.342	.160	.033	.149	7	0.0	0.0	.302	.294
42	45 P10-01	.113	.020	.022	.071	4	24.4	24.4	.101	.100
43	46 P10-01	.110	.021	.045	.044	7	24.4	24.4	.102	.097
44	47 P10-01	.655	.392	.197	.060	7	0.0	0.0	.651	.532
45	48 P10-01	.490	.333	.097	.060	7	32.4	32.4	.460	.395



STEEL PILE MEMBER STRESS REPORT

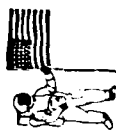
1-PILE ACAP STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNIT CK				COMPONENT VALUES				LOAD COND NO.				DIST FROM				FORCE FX				TORSION MX				MEMBER ACTION				MOMENT MY				MOMENT MZ				COMBINED LD				UNIT CK				CN																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
		AXIAL	Y-AXIS	Z-AXIS	NO.	COND	FROM	DIST	FX	KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS



3-PILE ACME STRUCTURE - 1.5. "AVY (34-1), DIAPYTER PILING) - C.C.MERN

/----- CONTROLLING MEMBER ACTIONS -----/ -NEXT TWO HIGH CASES- /																		
MEMBER NO.	GROUP IN	MAXIMUM COMBINED UNITY CK	UNITY CHECK COMPONENT VALUES			LOAD COMB NO.	DIST FROM FACE(FT)	FURF FX KIPS		TORSION MX IN-KIPS		MOMENT MY IN-KIPS		MOMENT MZ IN-KIPS		COMBINED LD UNITY CK CN		LD CN
			AXIAL	Y-AXIS	Z-AXIS			KIPS	KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS		
51-	52	RB3-01	.798	.109	.683	7	0.0	-54.54	-116.59	1355.27	130.14	.614	2	.606	1			
51-	56	JL2-01	.874	.280	.194	7	0.0	740.43	1052.73	-9798.55	-15041.85	.933	8	.777	2			
52-	53	HL3-01	.894	.030	.647	8	15.1	-14.86	-114.71	1506.75	725.02	.839	7	.707	2			
52-	54	HR5-01	.265	.037	.045	8	0.0	15.38	-9.07	180.45	213.64	.256	7	.236	2			
53-	54	HR3-01	1.364	.607	.679	8	0.0	-319.14	151.47	1416.66	-479.63	1.270	7	1.069	2			
53-	57	JL2-01	1.215	.500	.634	8	4.6	1537.23	26.41	-18995.69	-2615.06	1.104	7	.949	2			
55-	58	SL1-01	.727	.048	.676	7	28.5	-151.14	1560.46	-16748.54	-1159.97	.663	8	.567	2			
56-	59	SL1-01	.775	.052	.712	7	28.5	-141.44	-1484.24	-17757.37	2250.05	.708	8	.605	2			
57-	60	SL1-01	.930	.107	.822	8	28.5	-294.02	.528.01	20351.02	476.61	.882	7	.698	2			
58-	59	HR5-01	.504	.051	.004	7	29.0	21.23	-2.20	52.63	557.83	.491	8	.490	2			
60-	58	HR5-01	.834	.504	.421	8	0.0	-103.82	-3.48	601.22	306.12	.769	7	.833	1			
58-	61	SL1-01	.674	.029	.643	8	0.0	-81.67	-309.25	15940.62	873.89	.667	7	.526	2			
59-	60	RL5-01	1.133	.065	.275	7	32.6	-217.02	16.05	-353.25	290.34	1.005	2	.927	8			
50-	67	HR5-01	.854	.208	.571	8	29.0	105.14	-3.55	541.27	442.23	.820	7	.760	2			
59-	61	HR5-01	.640	.012	.004	7	0.0	-4.05	-27.92	61.07	-764.97	.634	2	.626	8			
59-	64	SL1-01	.761	.047	.706	8	0.0	-134.07	-149.43	-17569.49	1845.98	.704	8	.600	2			
60-	64	HR5-01	1.177	.653	.002	8	0.0	-213.10	-18.35	28.98	-519.79	1.017	1	.967	7			
60-	70	SL1-01	.850	.066	.784	8	0.0	-190.98	98.20	19413.15	667.75	.820	7	.646	2			
61-	62	LR01	.959	.106	.250	8	0.0	36.97	-0.00	530.08	139.70	.748	7	.645	1			
60-	61	LR01	.739	.375	.082	8	8.7	-102.00	-0.09	202.79	-62.38	.683	7	.626	1			
61-	71	SL1-01	.093	.020	.070	8	0.0	-57.53	32.84	1763.14	-371.27	.079	7	.061	2			
62-	63	LR01	.556	.358	.003	7	20.0	-37.33	-0.00	6.21	-30.04	.447	2	.295	8			
60-	62	LR01	.216	.030	.000	8	7.5	-5.74	.01	-0.02	22.48	.209	1	.205	7			
63-	64	LR01	.352	.106	.206	8	4.5	37.10	-0.08	435.41	-0.29	.225	7	.177	2			
63-	65	LR01	.206	.005	.654	8	7.5	-5.74	.01	-27.83	-17.47	.184	2	.183	7			
64-	65	LR01	.395	.229	.121	7	0.0	-62.29	-0.00	300.47	-10.75	.391	8	.329	2			
64-	72	SL1-01	.084	.006	.002	7	0.0	-17.83	35.59	268.86	-1906.69	.077	8	.062	2			
65-	66	LR01	.141	.002	.018	7	0.0	-15.15	-0.01	8.80	14.60	.133	8	.124	2			
65-	67	LR01	.985	.618	.012	7	0.0	-62.81	-0.00	30.15	36.83	.797	2	.602	8			
66-	67	LR01	.145	.001	.021	7	10.0	.22	.01	10.15	-14.82	.133	2	.105	1			
70-	66	HR7-01	.298	.001	.114	7	0.0	.09	7.27	.06	54.56	.286	7	.140	8			
67-	68	LR01	.073	.003	.007	7	10.0	.00	-0.01	-1.13	8.30	.056	2	.022	1			
67-	69	LR01	.312	.003	.025	7	0.0	-105.40	.02	649.06	9.74	1.070	1	.377	7			
70-	67	SL1-01	.559	.065	.465	8	0.0	-186.93	108.51	12247.38	34.32	.526	7	.426	2			
67-	76	SL1-01	.094	.021	.024	8	0.0	-62.39	-64.64	-1447.21	-1070.51	.066	7	.054	2			
68-	69	LR01	.072	.001	.024	8	0.0	-0.03	.01	11.96	-5.65	.049	7	.044	1			
70-	68	HR7-01	.255	.000	.000	2	0.0	-0.00	-5.51	.46	-46.72	.247	7	.085	8			
71-	72	LR01	.266	.190	.034	7	29.0	-9.42	-0.01	84.35	-9.12	.211	2	.093	8			
71-	73	LR01	.001	.000	.001	7	0.0	-0.00	-0.00	2.97	-0.00	.001	8	.001	3			
71-	75	LR01	1.463	.902	.037	8	0.0	-10.76	-0.06	7.05	4.10	.878	1	.235	7			
71-	77	LR01	.153	.000	.079	7	0.0	-0.01	.01	166.55	-17.25	.136	1	.134	2			
71-	78	LR01	.004	.000	.004	8	0.0	-0.00	-0.00	8.25	.00	.004	7	.004	3			
72-	74	LR01	.001	.000	.001	8	0.0	-0.00	-0.00	2.97	.00	.001	7	.001	3			
72-	75	LR01	.441	.264	.086	7	0.0	-5.15	.00	21.45	5.46	.240	2	.152	8			
72-	76	LR01	.169	.001	.078	7	0.0	.25	.02	164.35	21.00	.152	2	.148	1			
72-	82	LR01	.004	.000	.004	8	0.0	-0.00	-0.00	8.25	.00	.004	7	.004	3			
76-	75	SL1-01	.071	.019	.034	8	0.0	-55.55	-18.71	-1039.55	-765.36	.004	7	.039	2			
77-	75	LR01	.074	.008	.014	8	14.5	2.70	.04	38.11	11.22	.052	2	.052	7			

Error in Synchro Program

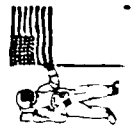


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3-PILE ACHR STRUCTURE -- U.S. NAVY (30-1), BIAFTER PILING) -- C. CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED	UNITY CHECK		LOAD COND	FIRST FROM	FORCE FX	TORSION MX		MY	MOMENT MZ		COMBINED LD	
			AVIAL	Y-AXIS	Z-AXIS	NO.	FX	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	UNITY CK	UNITY CK
75	78 W1R-01	.038	.004	.000	.029	R	14.5	2.79	-.05	.02	-6.82	.037	7	.032
76	77 RR6-01	.047	.011	.005	.041	M	14.2	-3.18	23.36	11.98	-31.43	.033	7	.027
76	78 RR6-01	.076	.013	.012	.052	M	0.0	-3.72	-27.35	25.79	-54.54	.051	7	.049
77	79 W1R-01	.001	.000	.001	.000	M	0.0	.00	.00	2.97	-.00	.001	7	.001
77	83 W1R-01	.004	.000	.004	.000	M	0.0	.00	.00	8.25	-.00	.004	7	.004
78	80 W1R-01	.001	.000	.001	.000	M	0.0	.00	.00	2.97	.00	.001	7	.001
78	84 W1R-01	.004	.000	.004	.000	M	0.0	.00	.00	8.25	-.00	.004	7	.004

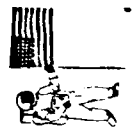


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3011F ACNR STRUCTURE -- U.S. NAVY (60-IN. DIAMETER PILING) -- C. CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED LOAD UNIT CK (COND END) (FT)	DIST FROM	FORCE FX	CONTROLLING MEMBER ACTIONS		Z-AXIS		LD V-Axis	LD KLY/RV	CLZ/R7	NEXT HIGH UN. CK.
					MOMENT MY	IN-KIPS	SHEAR	UNITY CK				
1	4 P10-01	565	7 6.1	-983.59	5592.70	-9294.67	.055	7	.055	7 6.0	6.0	466
2	5 P10-01	558	7 6.1	-982.41	5210.00	9121.31	.053	7	.053	7 6.0	6.0	455
3	6 P10-01	1,001	7 6.1	-1497.41	17739.53	54.08	.090	A	.090	A 6.0	6.0	896
4	7 P10-01	556	7 2.4	184.53	5.12	59.79	.000	A	.000	A 1.2	1.2	154
5	8 P10-01	563	7 0.0	-972.78	5700.52	-9117.47	.018	7	.015	7 32.1	32.1	464
6	9 P10-01	550	7 2.4	181.44	5.12	-103.39	.000	A	.000	1 1.2	1.2	146
7	10 P10-01	558	7 0.0	-972.07	5521.13	8957.22	.014	7	.013	7 32.1	32.1	453
8	11 P10-01	270	7 2.4	200.17	5.11	-223.34	.000	A	0.000	0 1.2	1.2	262
9	12 P10-01	990	7 0.0	-1853.41	17739.53	90.84	.037	A	.032	A 32.1	32.1	885
10	13 P10-01	157	7 2.5	-188.38	11.09	-150.69	.001	A	.010	7 1.2	1.2	154
11	14 P10-01	150	7 2.5	-181.30	11.09	98.23	.001	A	.009	7 1.2	1.2	146
12	15 P10-01	270	7 2.5	-200.17	11.09	-223.34	.001	7	.001	7 1.2	1.2	262
13	16 P10-01	235	7 2.5	-94.63	55.06	-146.11	.041	A	.025	2 39.7	39.7	235
14	17 P10-01	490	7 29.0	-182.52	382.14	111.70	.022	A	.015	8 39.7	39.7	433
15	18 P10-01	107	7 32.4	7.56	1244.45	-454.49	.023	7	.017	A 27.9	27.9	070
16	19 P10-01	218	7 29.0	-88.94	114.26	-86.62	.025	2	.017	2 39.7	39.7	218
17	20 P10-01	218	7 0.0	10.21	200.60	66.73	.045	7	.027	7 52.1	52.1	192
18	21 P10-01	240	7 29.0	4.55	239.78	76.76	.041	7	.025	7 52.1	52.1	213
19	22 P10-01	200	7 40.3	7.56	57.66	362.02	.020	7	.017	7 64.6	64.6	177
20	23 P10-01	142	7 40.3	9.90	55.06	317.36	.017	7	.015	7 64.6	64.6	178
21	24 P10-01	461	7 0.0	-171.43	371.19	69.60	.013	7	.010	A 39.7	39.7	381
22	25 P10-01	072	7 32.4	4.14	852.30	88.65	.026	7	.018	A 27.9	27.9	040
23	26 P10-01	078	7 29.0	-168.09	262.53	359.72	.025	7	.015	7 39.7	39.7	003
24	27 P10-01	193	7 29.0	17.47	96.68	131.91	.018	A	.015	A 52.1	52.1	191
25	28 P10-01	278	7 0.0	-288.56	-203.46	-143.83	.015	2	.013	2 64.6	64.6	708
26	29 P10-01	905	7 40.3	-250.57	-322.45	-350.04	.020	1	.018	A 64.6	64.6	836
27	30 P10-01	005	7 0.0	-184.09	260.17	31.71	.041	7	.023	7 39.7	39.7	342
28	31 P10-01	249	7 32.4	10.70	-3134.36	327.19	.029	A	.023	A 27.9	27.9	230
29	32 P10-01	806	7 40.3	-262.57	-275.48	33.23	.022	2	.017	7 64.6	64.6	746
30	33 P10-01	876	7 40.3	-262.45	-288.41	263.84	.039	A	.027	A 64.6	64.6	803
31	34 P10-01	051	7 2.4	52.91	5.12	-461.25	.000	A	.000	1 1.2	1.2	047
32	35 P10-01	093	7 32.4	-945.83	2002.40	-3441.91	.032	A	.021	A 31.7	31.7	399
33	36 P10-01	043	7 32.4	45.35	5.12	216.36	.000	A	.000	7 1.2	1.2	039
34	37 P10-01	490	7 32.4	517.67	1087.33	3734.62	.018	A	.013	A 31.7	31.7	394
35	38 P10-01	480	7 2.4	-517.67	5.11	166.11	.000	A	0.000	0 1.2	1.2	393
36	39 P10-01	1,188	7 32.4	-1830.41	-13512.01	-601.41	.042	A	.037	A 31.8	31.8	977
37	40 P10-01	051	7 2.5	-52.87	11.09	-519.74	.001	A	.003	A 1.2	1.2	047
38	41 P10-01	043	7 2.5	-45.32	11.09	267.34	.001	A	.002	A 1.2	1.2	039
39	42 P10-01	481	7 2.5	-517.67	11.09	166.11	.001	7	.000	2 1.2	1.2	382
40	43 P10-01	324	7 24.4	-45.72	-196.45	362.57	.056	7	.035	7 32.5	32.5	308
41	44 P10-01	401	7 24.4	-83.76	601.94	265.79	.033	A	.020	A 32.5	32.5	283
42	45 P10-01	365	7 32.4	200.14	2337.11	-1005.59	.040	7	.032	7 27.9	27.9	206
43	46 P10-01	346	7 0.0	-65.16	362.70	-861.24	.029	A	.023	A 69.7	69.7	302
44	47 P10-01	342	7 0.0	-40.92	-190.66	416.74	.059	7	.036	7 32.5	32.5	332
45	48 P10-01	113	7 24.4	-6.11	52.28	-93.82	.045	A	.026	A 42.9	42.9	101
46	49 P10-01	110	7 24.4	7.52	72.56	71.89	.041	A	.023	A 42.9	42.9	102
47	50 P10-01	655	7 0.0	233.05	574.26	331.75	.026	A	.014	A 52.5	52.5	651
48	51 P10-01	490	7 32.4	446.61	1607.52	1263.73	.025	7	.022	7 27.9	27.9	460



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3-PILE ACME STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

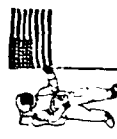
MEMBER NO.	GROUP ID	MAXIMUM COMBINED LOAD UNIT CK (COND END/FT)	DIST FROM	FORCE		TORSION	MOMENT		SHEAR		LD V-Axis		LD KLY/RY		NEXT HIGH UNLCK.
				FX	FY	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	IN-KIPS	UNIT CK	UNIT CK	UNIT CK	UNIT CK	
24	38 BR1-01	.902	7 0.0	-399.12	-80.21	-121.63	-144.27	.051	A	.034	A	.034	A	81.3	625 2
25	26 BR2-01	.803	A 24.4	-290.67	-84.11	718.88	154.49	.061	A	.036	A	.036	A	32.5	535 1
26	27 BR2-01	.170	A 24.4	12.77	4.55	61.30	140.92	.017	A	.014	A	.014	A	42.9	.165 7
27	27 BR2-01	.411	A 0.0	61.59	59.35	774.86	50.92	.046	A	.029	A	.029	A	32.5	.255 2
28	34 BR1-01	.079	A 0.0	-893.77	-13.13	266.52	421.49	.018	A	.017	A	.017	A	69.7	.814 1
29	38 JL1-01	1.449	A 32.6	76.61	167.21	-11338.52	-1560.59	.080	A	.070	A	.070	A	28.0	1.204 7
30	31 BRN-01	.055	A 2.4	-54.19	0.00	5.12	-163.84	.000	A	.000	A	.000	A	1.2	.054 7
31	43 P20-01	.742	7 32.4	-924.57	-549.49	-4552.58	10707.52	.054	A	.037	A	.037	A	31.7	.697 7
32	29 BRN-01	.053	A 2.4	-55.92	0.00	5.12	372.78	.000	A	.000	A	.000	A	1.2	.052 7
33	44 P20-01	.786	7 32.4	-927.54	593.68	-5694.93	-10230.58	.057	A	.039	A	.039	A	31.7	.717 8
34	33 BRN-01	1.061	A 2.4	-1142.13	0.00	5.11	434.58	.064	A	.052	A	.052	A	35.3	1.351 7
35	45 P20-01	1.536	A 36.1	-1987.21	-366.25	-20215.36	-163.84	.001	A	.003	A	.003	A	1.2	.054 7
36	34 BRN-01	.055	A 0.0	54.19	0.00	-5.12	372.78	.001	A	.003	A	.003	A	1.2	.052 7
37	36 BRN-01	.053	A 0.0	55.87	0.00	-5.12	144.66	.001	A	.000	A	.000	A	1.2	.052 7
38	38 BRN-01	1.058	A 2.5	-1142.13	-22.01	11.09	144.66	.001	A	.026	A	.026	A	36.2	.875 7
39	35 BRN-01	.265	A 19.8	-36.34	22.01	166.43	-151.85	.040	A	.010	A	.010	A	36.2	.593 7
40	34 BRN-01	.791	A 19.8	248.04	-3.82	253.87	44.19	.013	A	.043	A	.043	A	12.0	.412 8
41	40 JL2-01	.462	7 14.2	-401.70	-687.97	-1871.45	4013.28	.062	A	.056	A	.056	A	59.7	1.032 8
42	35 BRN-01	1.189	7 19.8	-409.60	-150.10	-1479.22	773.07	.046	A	.029	A	.029	A	36.2	.145 8
43	37 BRN-01	.146	A 0.0	-25.08	13.87	19.19	-51.68	.029	A	.018	A	.018	A	35.8	.120 1
44	35 BRN-01	.149	A 19.8	19.32	-7.84	29.35	-77.42	.020	A	.013	A	.013	A	35.8	.117 7
45	37 BRN-01	.330	A 0.0	65.73	-4.68	204.32	-23.86	.016	A	.012	A	.012	A	36.2	.280 7
46	41 JL2-01	.343	7 14.2	531.20	834.06	-1574.49	-3581.65	.070	A	.062	A	.062	A	12.0	.513 8
47	49 BR1-01	.465	7 47.4	-48.74	194.14	64.05	-1509.51	.100	A	.082	A	.082	A	59.7	.449 8
48	34 BRN-01	.349	7 30.2	-36.19	-26.49	239.62	-64.24	.039	A	.023	A	.023	A	59.3	.182 8
49	39 BRN-01	.186	A 19.8	36.61	-5.80	-12.24	65.14	.020	A	.016	A	.016	A	35.8	.174 7
50	39 BRN-01	.782	7 0.0	-177.48	2.55	273.62	-66.95	.011	A	.009	A	.009	A	59.3	.668 7
51	42 JL2-01	1.264	A 15.0	1330.99	137.12	-20009.54	106.64	.106	A	.103	A	.103	A	12.7	1.120 7
52	51 BR1-01	.938	A 55.7	-334.63	-1.42	-1114.45	-594.50	.056	A	.039	A	.039	A	71.3	.911 7
53	49 JL2-01	.855	7 18.5	411.22	-684.74	-8054.85	12324.74	.078	A	.059	A	.059	A	15.5	.835 8
54	51 JL2-01	.746	7 18.5	541.79	832.74	-7823.83	-13431.62	.090	A	.066	A	.066	A	15.5	.773 8
55	53 JL2-01	1.249	A 0.0	1330.00	114.71	-20009.54	130.45	.048	A	.045	A	.045	A	18.0	1.124 7
56	46 BRN-01	.024	A 2.4	24.41	0.00	5.12	-247.35	.000	A	.000	A	.000	A	1.2	.021 1
57	55 P20-01	.779	7 0.0	-929.71	-1184.27	-4847.30	10404.46	.093	A	.057	A	.057	A	4.5	.694 8
58	47 BRN-01	.022	A 2.4	23.19	0.00	5.12	222.62	.000	A	.000	A	.000	A	1.2	.017 2
59	56 P20-01	.745	7 0.0	-927.43	1115.42	-6170.45	-9682.03	.090	A	.060	A	.060	A	4.5	.716 8
60	48 BRN-01	.266	A 2.4	246.81	0.00	5.11	194.45	.000	A	.000	A	.000	A	1.2	.205 7
61	57 P20-01	1.452	A 0.0	-1869.13	-294.19	-20215.36	868.96	.134	A	.125	A	.125	A	4.5	1.320 7
62	49 BRN-01	.024	A 2.5	-24.69	-2.21	11.09	-528.22	.001	A	.001	A	.001	A	1.2	.021 1
63	51 BRN-01	.023	A 2.5	-23.17	0.00	11.09	251.58	.001	A	.001	A	.001	A	1.2	.017 2
64	53 BRN-01	.267	A 2.5	-266.81	-2.00	11.09	194.45	.001	A	.000	A	.000	A	1.2	.205 7
65	50 BRN-01	.450	7 15.1	-121.42	255.51	-147.42	543.81	.215	A	.114	A	.114	A	20.5	.394 8
66	49 BRN-01	1.238	7 15.2	294.25	117.25	1315.50	530.70	.116	A	.071	A	.071	A	20.5	1.170 8
67	55 JL2-01	.939	7 0.0	773.62	-978.45	-9642.70	14399.50	.141	A	.113	A	.113	A	3.9	.906 8
68	51 BRN-01	.432	7 0.0	-126.93	-230.74	-204.71	318.65	.200	A	.109	A	.109	A	20.5	.376 8
69	52 BRN-01	.223	7 0.0	14.71	116.92	223.25	52.23	.151	A	.079	A	.079	A	26.0	.210 8
70	50 BRN-01	.177	7 15.1	1.91	-124.10	204.50	-22.92	.160	A	.084	A	.084	A	26.0	.160 8



PILE ACMR STRUCTURE -- U.S. NAVY (30-IN. DIA-AFTER PILING) -- C. CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED LOAD FROM UNIT CK (COND END) (KT)	DIST FROM	CONTRIBUTING MEMBER ACTIONS		2-AXIS		LD		LD		NEXT	
				FORCE	TORSION	MOMENT	UNIT CK	LD	UNIT CK	LD	UNIT CK	LD	UNIT CK
51	52 AR3-01	7.98	7 0.0	-50.54	-116.59	1355.27	130.14	.114	A	.069	A	20.5	20.5
51	56 JL2-01	.086	7 0.0	760.43	1052.64	-9708.55	-15901.85	.108	A	.118	A	3.9	3.9
52	53 AR3-01	.876	A 15.1	-14.86	-114.71	1506.75	725.02	.122	A	.078	A	20.5	20.5
52	54 AR5-01	.265	A 0.0	15.38	-9.07	180.45	213.64	.026	B	.020	B	26.0	26.0
53	54 AR3-01	1.364	A 0.0	-319.14	151.47	1416.66	-479.63	.105	A	.088	A	20.5	20.5
53	57 JL2-01	1.215	A 4.6	1537.23	26.41	-14995.69	-2615.06	.101	A	.100	A	3.9	3.9
55	54 STL-01	.727	7 28.5	-131.18	1360.48	-16760.54	-1159.97	.142	7	.101	7	27.8	27.8
56	59 STL-01	.775	7 28.5	-141.48	-1088.24	-17757.57	2259.05	.154	7	.109	7	27.8	27.8
57	60 STL-01	.930	A 28.5	-294.02	-528.01	20351.02	476.61	.096	A	.080	A	27.8	27.8
58	59 AR5-01	.508	7 29.0	21.23	-20	52.63	557.83	.039	A	.039	A	56.6	56.6
60	58 AR5-01	.434	A 0.0	-103.82	-3.48	601.22	306.12	.029	A	.027	A	56.6	56.6
58	61 STL-01	.674	A 0.0	-81.07	-399.25	15940.62	873.89	.071	A	.059	A	14.6	14.6
59	67 AR5-01	1.133	7 32.6	-217.02	10.05	-353.25	296.34	.015	A	.036	A	64.7	64.7
59	60 AR5-01	.854	A 29.0	103.14	-3.55	581.27	462.23	.031	A	.029	A	56.6	56.6
59	61 AR5-01	.640	7 0.0	-4.05	-27.92	61.07	-766.97	.082	7	.065	7	64.7	64.7
59	64 AR5-01	.761	7 0.0	-134.07	-149.43	-17569.49	1845.98	.066	A	.051	A	14.6	14.6
60	70 STL-01	1.177	A 0.0	-190.98	98.20	28.98	-519.79	.050	A	.039	A	64.7	64.7
61	62 W1H-01	.959	A 0.0	36.97	-0.00	530.08	139.70	.106	A	.060	A	7.7	7.7
61	61 W1H-01	.739	A 8.7	-102.00	-0.00	1763.14	-62.38	.057	A	.007	A	14.6	14.6
62	63 W1H-01	.556	7 20.0	-37.53	-0.00	6.21	-34.04	.074	A	.002	A	26.3	26.3
62	62 W1H-01	.216	A 7.5	-3.70	.01	-0.02	22.48	.012	A	.006	A	152.4	152.4
63	65 W1H-01	.204	A 7.5	37.10	-0.00	455.41	-17.47	.074	A	.006	A	26.3	26.3
64	65 W1H-01	.295	7 0.0	-62.29	.01	-27.83	-10.75	.014	A	.005	A	56.1	56.1
64	72 STL-01	.084	7 0.0	-17.83	35.59	268.86	-1406.69	.092	A	.003	A	14.6	14.6
65	66 W1H-01	.141	7 0.0	-0.15	-0.01	4.80	14.60	.014	A	.002	A	14.6	14.6
65	67 W1H-01	.085	7 0.0	-62.81	-0.00	30.15	36.83	.079	A	.002	A	131.6	131.6
66	67 W1H-01	.105	7 10.0	.22	.01	10.16	-14.82	.009	A	.003	A	154.3	154.3
66	66 AR7-01	.298	7 0.0	.09	7.27	-96	54.56	.101	A	.058	A	74.7	74.7
67	68 W1H-01	.073	7 10.0	.40	-0.01	-1.13	8.30	.007	A	.002	A	43.9	43.9
67	69 W1H-01	.101	A 0.0	-105.40	.02	649.06	-10.70	.115	A	.001	A	154.3	154.3
70	67 STL-01	.559	A 0.0	-186.93	108.51	12247.38	34.52	.072	A	.067	A	8.8	8.8
67	76 STL-01	.094	A 0.0	-62.59	-64.64	-1447.21	-1070.51	.009	A	.007	A	3.9	3.9
68	69 W1H-01	.072	A 0.0	-0.03	.01	11.96	-5.65	.012	A	.001	A	131.6	131.6
70	68 AR7-01	.255	7 29.0	-9.42	-0.01	84.15	-46.72	.063	A	.041	A	43.9	43.9
71	72 W1H-01	.264	7 29.0	-0.01	-0.01	2.97	-9.12	.010	A	.000	A	220.9	220.9
71	73 W1H-01	.001	7 0.0	-0.00	-0.00	2.05	-0.00	.002	A	.000	A	28.9	28.9
71	75 W1H-01	1.443	A 0.0	-10.76	-0.00	7.05	4.10	.014	A	.000	A	135.4	135.4
71	77 W1H-01	.153	7 0.0	-0.01	.01	166.55	-17.23	.014	A	.001	A	191.3	191.3
71	81 W1H-01	.000	A 0.0	-0.00	-0.00	8.25	.00	.003	A	.000	A	38.1	38.1
72	74 W1H-01	.601	A 0.0	-0.00	-0.00	2.97	.00	.002	A	.000	A	22.9	22.9
72	75 W1H-01	.441	7 0.0	-5.15	.00	21.45	5.46	.014	A	.001	A	135.4	135.4
72	78 W1H-01	.169	7 0.0	.25	.02	164.55	21.00	.014	A	.001	A	42.8	42.8
72	82 W1H-01	.000	A 0.0	-0.00	-0.00	8.25	.00	.003	A	.000	A	8.5	8.5
76	75 STL-01	.071	A 0.0	-55.55	-18.71	-1039.55	-765.36	.006	A	.006	A	10.7	10.7
77	75 W1H-01	.074	A 14.5	2.79	.08	38.11	11.22	.008	A	.001	A	24.7	24.7

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SCHEMATIC STRUCTURE -- U.S. NAVY (NORTH DIAMETER PILING) -- C. CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED LOAD FROM		DIST		FORCE		TORSION		MOMENT		Z-AXIS		LD V-AXIS		LD KLY/RY		KLZ/RZ		NEXT LD	
		UNITY CK	COND	END(FT)	KIPS	FX	KIPS	FX	IN-KIPS	MY	IN-KIPS	UNITY CK	CM	CM	CM	CM	CM	CM	CM	UN. CK.	CM
75	78 W18-01	.014	A	14.5	2.70	-3.18	-0.05	23.56	.42	11.94	-6.42	.007	7	.000	1	24.7	110.5			.037	7
76	77 W18-01	.007	A	14.2	-3.18	-1.72	-27.35	-27.35	11.94	25.79	-31.43	.039	A	.020	A	32.4	32.4			.033	7
76	78 W18-01	.076	A	0.0	0.0	0.0	0.0	0.0	25.79	25.79	-54.34	.046	A	.020	A	32.4	32.4			.051	7
77	79 W18-01	.001	A	0.0	0.0	0.0	0.0	0.0	2.97	2.97	-0.00	.002	A	.000	7	5.1	22.9			.001	7
77	83 W18-01	.004	A	0.0	0.0	0.0	0.0	0.0	8.25	8.25	-0.00	.003	7	.000	7	8.5	38.1			.004	7
78	80 W18-01	.001	A	0.0	0.0	0.0	0.0	0.0	2.97	2.97	-0.00	.002	7	.000	A	5.1	22.9			.001	7
78	84 W18-01	.004	A	0.0	0.0	0.0	0.0	0.0	8.25	8.25	-0.00	.003	3	.000	A	8.5	38.1			.004	7



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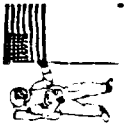
PILE ACVR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHEN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED LOAD UNITS	DIST FROM END(FT)	AXIAL STRESS KSI	REINFORCING STRESS KSI		Z KSI	SHEAR FORCE KIPS		KIPS	KLVARY KLZ/RZ		SECOND-HIGHEST LOAD UNITS		THIRD-HIGHEST LOAD UNITS	
					Y KSI	X KSI		KIPS	KIPS		KIPS	KIPS	UNIT CHECK	COND	UNIT CHECK	COND
1	4 P10-01	.565	7 6.1	-5.22	-6.99	0.00	0.00	127.75	74.36	6.0	6.0	.466	A	.450	1	
2	5 P10-01	.558	7 6.1	-5.22	-6.83	0.00	0.00	-125.37	71.97	6.0	6.0	.455	A	.441	2	
3	6 P10-01	1.001	A 6.1	-10.08	-11.53	0.00	0.00	-7.74	243.91	6.0	6.0	.496	7	.799	1	
4	7 P10-01	.156	7 2.4	3.37	-6.99	0.00	0.00	-28.97	-19.26	32.1	32.1	.154	A	.137	1	
5	8 P10-01	.563	7 2.4	3.23	-6.99	0.00	0.00	-7.74	-19.26	32.1	32.1	.154	A	.137	1	
6	9 P10-01	.556	7 1.0	-5.16	-6.84	0.00	0.00	24.94	-18.46	32.1	32.1	.146	A	.131	1	
7	10 P10-01	.270	A 2.4	5.40	-11.53	0.00	0.00	-7.74	-73.57	32.1	32.1	.262	7	.239	2	
8	11 P10-01	.990	A 0.0	-9.44	-11.53	0.00	0.00	-7.74	-73.57	32.1	32.1	.262	7	.239	2	
9	12 P10-01	.157	7 2.5	3.37	0.00	0.00	0.00	7.02	.73	1.2	1.2	.154	A	.137	1	
10	13 P10-01	.150	7 2.5	-3.23	0.00	0.00	0.00	-6.72	.73	1.2	1.2	.146	A	.131	2	
11	14 P10-01	.270	A 2.5	-5.40	0.00	0.00	0.00	7.02	.73	1.2	1.2	.262	7	.232	1	
12	15 P10-01	.235	A 29.0	-3.44	-1.37	0.00	0.00	3.33	.80	39.7	39.7	.235	7	.219	1	
13	16 P10-01	.400	7 29.0	-6.44	-3.40	0.00	0.00	.91	2.58	39.7	39.7	.433	A	.410	2	
14	17 P10-01	.107	A 32.4	.12	2.19	0.00	0.00	7.94	7.50	27.9	27.9	.070	2	.067	1	
15	18 P10-01	.218	A 29.0	-3.24	-1.23	0.00	0.00	2.94	1.21	39.7	39.7	.218	7	.211	1	
16	19 P10-01	.218	7 0.0	.04	4.08	0.00	0.00	1.25	-1.53	52.1	52.1	.192	2	.189	8	
17	20 P10-01	.244	7 29.0	.53	4.73	0.00	0.00	-1.31	1.66	52.1	52.1	.213	2	.209	1	
18	21 P10-01	.200	A 40.3	.31	3.52	0.00	0.00	-4.40	1.00	64.6	64.6	.187	7	.187	2	
19	22 P10-01	.182	7 40.3	.41	3.52	0.00	0.00	-4.45	.50	64.6	64.6	.178	2	.173	8	
20	23 P10-01	.461	7 0.0	-6.24	-5.23	0.00	0.00	-1.14	-2.30	39.7	39.7	.381	2	.370	8	
21	24 P10-01	.072	A 32.4	.13	1.42	0.00	0.00	-7.02	6.49	27.9	27.9	.040	3	.032	2	
22	25 P10-01	.478	A 29.0	-6.11	-3.81	0.00	0.00	-2.97	2.20	39.7	39.7	.403	7	.401	1	
23	26 P10-01	.193	A 29.0	1.09	3.07	0.00	0.00	-2.55	.79	52.1	52.1	.191	2	.190	7	
24	27 P10-01	.778	A 0.0	-10.62	-2.72	0.00	0.00	-1.83	2.14	64.6	64.6	.708	1	.685	7	
25	28 P10-01	.905	7 40.3	-10.45	-5.20	0.00	0.00	2.81	-2.19	64.6	64.6	.836	A	.824	2	
26	29 P10-01	.405	A 0.0	-5.37	-2.24	0.00	0.00	1.66	-1.94	39.7	39.7	.342	7	.340	1	
27	30 P10-01	.209	A 32.4	.17	5.21	0.00	0.00	-8.7	-15.26	27.9	27.9	.230	7	.194	1	
28	31 P10-01	.806	A 40.3	-10.78	-3.63	0.00	0.00	-1.37	-2.49	64.6	64.6	.746	1	.720	7	
29	32 P10-01	.876	7 40.3	-10.78	-4.27	0.00	0.00	-2.99	-2.00	64.6	64.6	.803	A	.799	2	
30	33 P10-01	.051	A 2.4	1.06	-0.27	0.00	0.00	.00	.36	1.2	1.2	.047	7	.042	1	
31	34 P10-01	.493	7 52.4	-6.03	-3.48	0.00	0.00	14.19	9.35	31.7	31.7	.390	A	.377	2	
32	35 P10-01	.043	A 2.4	.01	.00	0.00	0.00	-11.48	.36	1.2	1.2	.039	7	.035	2	
33	36 P10-01	.490	7 32.4	-6.02	-3.40	0.00	0.00	-11.48	6.65	31.7	31.7	.394	A	.373	2	
34	37 P10-01	.490	A 2.4	10.35	.00	0.00	0.00	.00	.36	1.2	1.2	.383	7	.347	2	
35	38 P10-01	1.188	A 32.6	-13.41	-11.80	0.00	0.00	.74	-59.73	31.8	31.8	.977	7	.872	1	
36	39 P10-01	.051	A 2.5	-1.06	.00	0.00	0.00	1.98	.73	1.2	1.2	.047	7	.042	1	
37	40 P10-01	.043	A 2.5	-1.06	.00	0.00	0.00	-1.70	.73	1.2	1.2	.039	7	.035	2	
38	41 P10-01	.324	7 24.4	-3.48	-5.53	0.00	0.00	.00	.73	1.2	1.2	.382	7	.346	2	
39	42 P10-01	.365	7 24.4	-3.05	-5.62	0.00	0.00	-5.02	.80	32.5	32.5	.308	A	.288	2	
40	43 P10-01	.365	7 32.4	3.37	4.51	0.00	0.00	-4.58	3.56	32.5	32.5	.296	A	.276	1	
41	44 P10-01	.306	A 0.0	-1.71	-5.27	0.00	0.00	-4.25	-2.47	69.7	69.7	.302	7	.298	1	
42	45 P10-01	.342	7 0.0	-3.45	-3.93	0.00	0.00	5.52	.74	32.5	32.5	.532	A	.505	2	
43	46 P10-01	.113	A 24.4	-0.38	1.51	0.00	0.00	1.51	.78	42.9	42.9	.101	1	.100	2	
44	47 P10-01	.110	7 24.4	.04	1.92	0.00	0.00	-1.21	.78	42.9	42.9	.102	8	.097	1	
45	48 P10-01	.655	7 0.0	8.08	5.67	0.00	0.00	.80	-3.39	52.5	52.5	.651	A	.532	1	
46	49 P10-01	.400	7 32.4	7.20	5.38	0.00	0.00	5.87	2.16	27.9	27.9	.460	A	.395	1	



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MEMBER GROUP		MAXIMUM		LOAD		DIST		AXIAL		BENDING		SHEAR		FZ		KLY/RY		SECOND-HIGHEST		THIRD-HIGHEST	
NO.	ID	UNIT	CK	NO.	COND	FROM	END(FT)	STRESS	KSI	V	KSI	Z	KSI	KIPS	KIPS	KLY/RY	KLY/RY	UNIT	LOAD	UNIT	LOAD
																		CHECK	COND	CHECK	COND
24	38 BR1-01	.982	7	0.0		-10.49		-2.88	0.00			-4.31	1.72	81.3	81.3			.825	2	.800	8
25	26 BR2-01	.803	A	24.4		-10.57		-6.29	0.00			-1.58	3.49	32.5	32.5			.535	1	.523	2
25	27 BR4-01	.170	A	24.4		.00		2.89	0.00			-2.52	.52	42.9	42.9			.165	7	.160	2
26	27 BR2-01	.411	A	0.0		2.24		6.64	0.00			1.77	-4.03	32.5	32.5			.255	2	.255	1
26	34 BR1-01	.979	A	0.0		-12.94		-2.79	0.00			4.11	1.11	69.7	69.7			.814	1	.784	7
26	34 JL1-01	1.409	A	32.6		12.59		18.91	0.00			4.44	-32.47	28.0	28.0			1.204	7	1.087	2
28	31 BRN-01	.055	A	2.4		-1.14		.00	.01			.00	.56	1.2	1.2			.054	7	.046	1
29	43 P20-01	.782	7	32.4		-0.40		-10.04	0.00			-36.44	-15.23	31.7	31.7			.697	8	.624	2
29	32 BRN-01	.053	A	2.4		-1.12		.00	.03			.00	.54	1.2	1.2			.052	7	.045	2
29	44 P20-01	.784	7	32.4		-6.40		-10.22	0.00			36.08	-16.34	31.7	31.7			.717	8	.640	2
30	33 BRN-01	1.061	A	2.4		-22.84		.00	.01			0.00	.36	1.2	1.2			.873	7	.780	2
30	45 P20-01	1.536	A	36.1		-14.56		-17.66	0.00			-.74	-74.41	35.3	35.3			1.351	7	1.168	1
31	34 BRN-01	.055	A	0.0		1.14		.00	.01			-2.42	.31	1.2	1.2			.054	7	.046	2
32	36 BRN-01	.053	A	0.0		1.12		.00	.03			2.33	.36	1.2	1.2			.052	7	.045	2
33	38 BRN-01	1.054	A	2.5		22.44		.00	.01			.00	.73	1.2	1.2			.875	7	.782	2
34	35 BRN-01	.265	A	0.0		-1.58		-3.97	0.00			-2.91	-1.59	36.2	36.2			.186	7	.186	1
39	34 BRN-01	.791	A	19.8		12.89		4.20	0.00			-1.18	1.93	36.2	36.2			.593	7	.511	2
34	40 JL2-01	.462	7	14.2		6.58		3.61	0.00			-36.32	-19.13	12.0	12.0			.412	8	.375	2
34	53 BR1-01	1.180	7	47.4		-11.41		-9.34	0.00			-6.64	-7.40	59.7	59.7			1.032	8	1.001	2
35	36 BRN-01	.167	7	19.8		.42		3.20	0.00			-2.60	1.45	36.2	36.2			.145	8	.105	3
35	37 BRN-01	.146	A	0.0		-1.72		.00	0.00			-1.40	.50	35.8	35.8			.120	1	.117	7
39	35 BRN-01	.149	A	19.8		1.33		1.89	0.00			1.48	.44	35.8	35.8			.117	7	.113	2
36	37 BRN-01	.330	A	0.0		3.42		3.71	0.00			.47	-1.77	36.2	36.2			.280	7	.247	2
36	41 JL2-01	.343	7	14.2		4.23		3.19	0.00			38.42	-16.85	12.0	12.0			.313	8	.286	2
36	49 BR1-01	.465	7	47.4		-1.28		-8.06	0.00			13.23	1.00	59.7	59.7			.449	8	.424	2
37	38 BRN-01	.309	7	30.2		-1.48		-4.36	0.00			.90	1.65	59.3	59.3			.142	8	.152	2
37	39 BRN-01	.186	A	19.8		2.51		1.51	0.00			-2.34	.38	35.8	35.8			.174	7	.170	2
38	39 BRN-01	.742	7	0.0		-9.22		-5.06	0.00			-1.26	-1.75	59.3	59.3			.668	8	.603	2
38	42 JL2-01	1.246	A	15.0		10.59		16.31	0.00			11.50	-178.15	12.7	12.7			1.120	7	.978	2
34	51 BR1-01	.938	A	55.7		-8.40		-7.07	0.00			4.61	-6.16	71.3	71.3			.911	7	.875	1
40	49 JL2-01	.855	7	18.3		7.46		12.00	0.00			-57.56	-37.44	15.5	15.5			.835	8	.675	2
41	51 JL2-01	.786	7	18.3		4.50		12.67	0.00			64.44	-37.91	15.5	15.5			.773	8	.623	2
42	53 JL2-01	1.249	A	0.0		10.67		16.31	0.00			11.50	74.43	18.0	18.0			1.124	7	.981	2
43	46 BRN-01	.024	8	2.4		.49		.00	.02			.00	.36	1.2	1.2			.021	1	.021	7
43	55 P20-01	.779	7	0.0		-5.81		-10.02	0.00			-24.32	-30.57	4.5	4.5			.694	8	.626	2
44	47 BRN-01	.022	A	2.4		.46		.00	.02			.00	.36	1.2	1.2			.017	2	.016	1
44	56 P20-01	.785	7	0.0		-6.40		-10.17	0.00			32.11	-40.31	4.5	4.5			.716	8	.639	2
45	48 BRN-01	.266	A	2.4		5.74		.00	.02			0.00	.36	1.2	1.2			.205	7	.194	1
45	57 P20-01	1.452	A	0.0		-13.70		-17.66	0.00			-.74	227.19	4.5	4.5			1.320	7	1.137	2
46	49 BRN-01	.024	A	2.5		.49		.00	.03			1.03	.73	1.2	1.2			.021	1	.021	7
47	51 BRN-01	.023	A	2.5		.46		.00	.02			.00	.73	1.2	1.2			.017	2	.016	1
48	53 BRN-01	.267	A	2.5		-5.74		.00	.02			.00	.73	1.2	1.2			.205	7	.194	1
49	50 BRN-01	.450	7	15.1		-4.95		-4.77	0.00			-7.34	-1.44	20.5	20.5			.390	8	.369	2
50	49 BRN-01	1.234	7	15.2		11.92		14.63	0.00			-2.33	8.11	20.5	20.5			1.170	8	.982	2
49	55 JL2-01	.939	7	0.0		6.14		14.13	0.00			133.43	56.41	3.9	3.9			.906	8	.746	2
50	51 BRN-01	.432	7	0.0		-5.21		-4.12	0.00			6.14	2.01	20.5	20.5			.378	8	.354	2
50	52 BRN-01	.223	7	0.0		.76		4.04	0.00			1.07	-1.73	26.0	26.0			.210	8	.184	1
54	50 BRN-01	.177	7	15.1		.10		3.72	0.00			-.95	1.77	26.0	26.0			.160	8	.145	2



3-PILE ACAPR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITS CK NO.	LOAD COND NO.	DIST FROM END(FT)	AXIAL STRESS KSI	BENDING STRESS		SHEAR STRESS KSI	FZ KIPS		KLY/RY KLZ/PZ		SECOND-HIGHEST UNIT CHECK		HIGHEST UNIT CHECK		THIRD-HIGHEST UNIT CHECK
						Y	Z										
51	52 HR3-01	798	7	0.0	-2.24	-14.48	0.00	0.00	-8.52	20.5	20.5	20.5	614	2	614	606	1
51	56 J12-01	876	7	0.0	6.05	15.25	0.00	0.00	68.17	3.9	3.9	3.9	933	8	933	777	2
52	53 HR3-01	876	8	15.1	-2.61	-14.28	0.00	0.00	9.45	20.5	20.5	20.5	933	7	933	707	2
52	54 HR5-01	265	8	0.0	0.00	4.63	0.00	0.00	-35	26.0	26.0	26.0	256	7	256	236	2
53	54 HR3-01	1364	8	0.0	-13.11	-16.35	0.00	0.00	-9.24	20.5	20.5	20.5	1,270	7	1,270	1,069	2
53	57 J12-01	1,215	8	4.6	12.23	14.02	0.00	0.00	-179.59	3.9	3.9	3.9	1,104	7	1,104	949	2
55	54 STL-01	1,277	7	28.5	-2.96	-14.67	0.00	0.00	-31.66	27.8	27.8	27.8	653	8	653	567	2
56	59 STL-01	775	7	28.5	-1.04	-15.62	0.00	0.00	-38.50	27.8	27.8	27.8	704	8	704	605	2
57	60 STL-01	930	8	28.5	-2.15	-17.77	0.00	0.00	41.82	27.8	27.8	27.8	642	7	642	698	2
58	59 HR5-01	508	7	29.0	1.10	4.44	0.00	0.00	84	56.6	56.6	56.6	491	8	491	490	2
60	58 HR5-01	834	8	0.0	-5.40	-11.89	0.00	0.00	-3.96	56.6	56.6	56.6	769	7	769	633	1
58	61 STL-01	674	8	0.0	-2.00	-13.93	0.00	0.00	-61.61	14.6	14.6	14.6	667	7	667	526	2
58	67 HR5-01	1,133	7	32.6	-11.24	-8.13	0.00	0.00	-2.49	64.7	64.7	64.7	1,005	2	1,005	927	8
59	60 HR5-01	854	8	29.0	5.34	13.09	0.00	0.00	3.86	56.6	56.6	56.6	820	7	820	760	2
59	61 HR5-01	600	7	0.0	-2.1	-13.56	0.00	0.00	-46	64.7	64.7	64.7	634	2	634	624	8
59	64 STL-01	761	7	0.0	-2.98	-15.42	0.00	0.00	78.29	14.6	14.6	14.6	704	8	704	600	2
60	64 HR5-01	1,177	8	0.0	-11.08	-9.18	0.00	0.00	3.03	64.7	64.7	64.7	1,017	1	1,017	967	7
61	62 HR5-01	859	8	0.0	-1.40	-16.95	0.00	0.00	-93.40	5.9	5.9	5.9	820	7	820	646	2
61	61 HR5-01	739	8	8.7	-6.30	2.28	0.00	0.00	-9.45	7.7	34.3	34.3	748	7	748	645	1
61	71 STL-01	1,093	8	0.0	-2.30	-1.57	0.00	0.00	-9.34	14.6	14.6	14.6	683	7	683	626	1
62	63 STL-01	556	7	20.0	-2.30	-1.57	0.00	0.00	-9.34	14.6	14.6	14.6	683	7	683	626	1
62	62 HR5-01	216	8	7.5	-5.53	-8.00	4.01	0.00	32	26.3	56.1	56.1	447	2	447	295	8
63	64 HR5-01	352	8	4.5	2.29	4.89	0.00	0.00	6.64	7.7	34.3	34.3	209	1	209	205	7
63	65 HR5-01	306	8	7.5	-1.2	-1.34	0.00	0.00	-22	26.3	56.1	56.1	225	7	225	177	2
64	65 HR5-01	395	7	0.0	-3.45	3.37	0.00	0.00	-3.21	14.9	66.4	66.4	144	2	144	183	7
64	72 STL-01	844	7	0.0	-2.11	-1.44	0.00	0.00	-3.21	14.9	66.4	66.4	391	8	391	329	2
65	66 HR5-01	141	7	0.0	-0.02	-4.2	2.61	0.00	-2.46	14.6	14.6	14.6	677	8	677	662	2
65	67 HR5-01	145	7	10.0	-3.88	3.0	0.00	0.00	-1.71	30.5	150.3	150.3	133	8	133	124	2
66	67 HR5-01	298	2	0.0	0.03	6.42	0.00	0.00	1.71	30.5	150.3	150.3	797	2	797	602	8
67	68 HR5-01	298	2	0.0	0.02	6.42	0.00	0.00	0.01	43.9	43.9	43.9	133	2	133	105	1
67	69 HR5-01	101,512	8	0.0	-0.51	-7.28	1.44	0.00	0.01	43.9	43.9	43.9	244	7	244	140	8
70	67 STL-01	559	8	0.0	-1.37	-10.69	0.00	0.00	-10.65	34.5	154.5	154.5	1,070	1	1,070	577	7
70	67 STL-01	559	8	0.0	-1.37	-10.69	0.00	0.00	-10.65	34.5	154.5	154.5	1,070	1	1,070	577	7
70	69 HR5-01	994	8	0.0	-0.46	-1.57	0.00	0.00	-10.65	34.5	154.5	154.5	526	7	526	426	2
70	69 HR5-01	994	8	0.0	-0.46	-1.57	0.00	0.00	-10.65	34.5	154.5	154.5	526	7	526	426	2
70	69 HR5-01	994	8	0.0	-0.46	-1.57	0.00	0.00	-10.65	34.5	154.5	154.5	526	7	526	426	2
71	72 HR5-01	255	2	0.0	0.00	5.50	0.00	0.00	-33	61.8	131.6	131.6	666	7	666	554	2
71	72 HR5-01	255	2	0.0	0.00	5.50	0.00	0.00	-33	61.8	131.6	131.6	666	7	666	554	2
71	73 HR5-01	266	7	29.0	-5.8	0.05	0.00	0.00	-33	61.8	131.6	131.6	666	7	666	554	2
71	73 HR5-01	266	7	29.0	-5.8	0.05	0.00	0.00	-33	61.8	131.6	131.6	666	7	666	554	2
71	75 HR5-01	1,463	8	0.0	-2.36	0.70	1.27	0.00	-19	135.4	238.9	238.9	211	2	211	093	8
71	75 HR5-01	1,463	8	0.0	-2.36	0.70	1.27	0.00	-19	135.4	238.9	238.9	211	2	211	093	8
71	77 HR5-01	1,553	7	0.0	-2.00	1.87	0.00	0.00	-19	135.4	238.9	238.9	211	2	211	093	8
71	77 HR5-01	1,553	7	0.0	-2.00	1.87	0.00	0.00	-19	135.4	238.9	238.9	211	2	211	093	8
71	81 HR5-01	1,004	8	0.0	-0.00	0.09	0.00	0.00	-19	135.4	238.9	238.9	211	2	211	093	8
72	74 HR5-01	1,001	8	0.0	-0.00	0.09	0.00	0.00	-19	135.4	238.9	238.9	211	2	211	093	8
72	75 HR5-01	1,49	7	0.0	-0.00	0.09	0.00	0.00	-19	135.4	238.9	238.9	211	2	211	093	8
72	75 HR5-01	1,49	7	0.0	-0.00	0.09	0.00	0.00	-19	135.4	238.9	238.9	211	2	211	093	8
72	82 HR5-01	1,004	8	0.0	-0.00	0.09	0.00	0.00	-19	135.4	238.9	238.9	211	2	211	093	8
76	75 STL-01	871	8	0.0	-0.41	-1.13	0.00	0.00	-19	135.4	238.9	238.9	211	2	211	093	8
77	75 HR5-01	874	8	14.5	0.17	0.43	1.05	0.00	-19	135.4	238.9	238.9	211	2	211	093	8

Error in Sign Convention



STRUT MEMBER STRESS REPORT FILE 5

PAGE 4
DATE 04/27/76

3-PILE ACWR STRUCTURE -- U.S. NAVY (36-IN. DIAMETER PILING) -- C. CHERN

MEMBER NO.	GROUP ID	MAXIMUM COMBINED UNITS CK	LOAD COND NO.	DIST FROM END(FT)	AXIAL STRESS KSI	RESULTING STRESS		FY KIPS	FZ KIPS	KLY/RY KLZ/RZ	SECOND-HIGHEST		THIRD-HIGHEST	
						Y KSI	Z KSI				UNITY CHECK	LOAD COND	UNITY CHECK	LOAD COND
75	78	W18-01	A	14.5	.17	.00	-.64	.01	.33	24.7	.037	7	.032	2
76	77	W18-01	A	14.2	-.22	-.77	0.00	.14	.31	32.4	.033	7	.027	3
76	78	W18-01	A	0.0	-.25	-1.37	0.00	-.36	.40	32.4	.051	7	.049	2
77	79	W18-01	A	0.0	.00	.03	-.00	-.00	.17	5.1	.001	7	.001	3
77	83	W18-01	A	0.0	.00	.09	-.00	-.00	.27	34.1	.004	7	.004	3
78	80	W18-01	A	0.0	-.00	.03	-.00	.00	.16	5.1	.001	7	.001	3
78	84	W18-01	A	0.0	-.00	.09	-.00	-.00	.27	34.1	.004	7	.004	3





10.42.24. BACKWARD SUBSTITUTION
10.42.24.25. COUNTING DEFLECTIONS
10.42.24.26. COUNTING FORCES
10.42.24.27. COMPUTING UNITY CHECK
10.42.24.28. COMPUTING FOURTH TERM
10.42.24.29. ASC STOP STRAN
10.42.24.30. STOP
10.42.24.31. 61400 26.355 22561 3414.
10.42.24.32. 30 2
10.42.24.33. 61400 26.355
10.42.24.34. SERVICE UNITS= 214.2
10.42.24.35. JOB COSTS= 53.55
10.42.24.36. 17248 26.375 5
10.42.24.37. 2364 26.375
10.42.24.38. *FL* *CPU SEC. *DISC PRUS* DISC ACC
10.42.24.39. *FL* *CPU SEC. *DISC PRUS* DISC ACC
10.42.24.40. *FL* *CPU SEC. *DISC PRUS* DISC ACC

A-6 MEMBER WEIGHT TAKEOFF



004427:5 7972

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[illegible][illegible][illegible]

CHERN 00442705 197A LEC9015 SYSMSG



//EINSE001 DD *
//EINSE001 DD *
//EINSE001 DD *
//EINSE001 DD *
//EINSE001 DD *

DD DSN=DSN006.LIBD6,DISESSM
//JULI8 -CARS=(00,0)
//TAF=(05,00)PRTIME=250K
//CC9016-JOB (000427050277710001627616),CHERE
//SPZCP , DVICU=*,DTIM=*,DAY
//LUNEN,CLASSE=C

[illegible]

//FT05001 ON SYNGUZA
 //FT05001 ON 00172(CIC,OFFER),DSNAME=XAASPT0001,
 //FT05001,REPLT),VOLUME=1797H,DCRE(1)HFCLOH0,HLKSI7E=40,REFC=4F)

15F2301 ALLOC. FOR REC9UD
1FF2371 10% ALLOCATED TO JOWLIN
1FF2371 BMS ALLOCATED TO STOR601
1FF2311 BMS ALLOCATED TO FTO5001
1FF1481 - SIFP WAS EXECUTED - COND CONF 0000
1FF2351 DRRDDN.LIABO
1FF2851 VOL SER NOSE CHL002.

IEFZ851	VOL SGT MSGS=DLJ002.
IEFZ851	VOL SVT9A124.TI05932.RV0001.LFC0016.ASPHANN1
IEFZ851	VOL SGT MSGS=ASPAR3.
IEFZ851	VOL SVT9A124.TI05932.RV0001.LFC0016.ASPHANN1
IEFZ851	VOL SGT MSGS=DLJ002.
IEFZ851	VOL SVT9A124.TI05932.RV0001.LFC0016.ASPHANN1

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15-0831 VM SW NJSE 017979.
HEF3731 STEP / START 76124.1059
HEF3741 STEP / STOP 76124.1100 CPU 0.1PM 00.32SEC STJOB VIRT 232K

```

PACES DATA ACQUISITION SYSTEM

* STEP NAME	START TIME	10.59.53.01	MAIN CPU# REQD	250 *	LCS CODE REQD	0 K	STEP CPU	00.00.00.32 *
* PGM NAME	STOP TIME	11.00.17.35	MAIN CPU# USED	232 *	LCS CODE USED	0 K	JOB CPU	00.00.00.32 *
* DISPATCH PRY 1	ELAP. TIME	00.00.23.94	MAIN CPU# REQD	0 *	LCS CODE REQD	0 K	CONDITION CODE	0000 *
=====								
FCP STATISTICS								
=====								

[illegible]

IF37471 STEP / TOTAL EXP 00027A

IEF2AS1
IEF2AS1 DCPROD.LIH06
IEF2AS1 VNL SER MNS= ONLN002.
IEF3751 JNR /IEC001A / STAT7 24124 1450
*EPT

LIST OF BOAT DATA -- ACQU 3-BOULE SIZE OF THE MATERIAL LIST G -- U.S. NAVY -- T. CHEN

1	34,000	1,500	0.0	3	100,000	PTING
1	34,000	1,750	0.0	3	50,000	PTING
1	34,000	1,250	0.0	3	22,000	PTING
1	41,000	1,000	0.0	3	6,000	JACKET LFG JOINT CAN
1	41,000	1,000	0.0	3	10,000	JACKET LFG JOINT CAN
1	41,000	1,000	0.0	3	16,000	JACKET LFG JOINT CAN
1	42,000	1,500	0.0	3	21,200	JACKET LFG SPLASH 24
1	40,000	0,500	0.0	3	25,000	JACKET LFG
1	40,000	1,500	0.0	3	25,000	JACKET LFG
1	24,000	0,750	0.0	3	7,000	JACKET BRACE JT CAN
1	14,000	0,500	0.0	3	25,000	JKT HORI. BRACE 1ST
1	14,000	0,375	0.0	3	20,000	JKT HORI. BRACE 1ST
1	16,000	0,500	0.0	3	40,000	JKT VERT. BRACE 1ST
1	18,000	0,500	0.0	3	20,000	JKT HORI. BRACE 2ND
1	14,000	0,375	0.0	3	20,000	JKT VERT. BRACE 2ND
1	20,000	0,625	0.0	3	50,000	JKT VERT. BRACE 2ND
1	12,750	0,500	0.0	3	19,770	JKT HORI. BRACE 3RD
1	12,750	0,375	0.0	3	19,770	JKT HORI. BRACE 3RD
1	20,000	0,625	0.0	3	10,000	JKT VERT. BRACE 3RD
1	20,000	1,000	0.0	3	13,000	JKT VERT. BRACE 3RD
1	16,000	0,500	0.0	3	15,000	JKT HORI. BRACE 4TH
1	12,750	0,500	0.0	3	15,000	JKT HORI. BRACE 4TH
1	36,000	1,250	0.0	3	57,000	SUPER-STRUCTURE LEGS
1	12,750	0,500	0.0	3	24,000	SUPER-STRUCTURE BRAC
1	12,750	0,500	0.0	3	52,050	SUPER-STRUCTURE BRAC
1	12,750	0,375	0.0	2	18,000	SUPER-STRUCTURE BRAC
1	6,625	0,200	0.0	2	9,000	SUPER-STRUCTURE BRAC
2	16,000	50,000	0.0	3	29,000	EQUIPMENT DECK
2	8,000	24,000	0.0	2	25,000	EQUIPMENT DECK
2	8,000	24,000	0.0	10	20,000	EQUIPMENT DECK
3	20,000	25,000	0.250	1	0.0	EQUIPMENT DECK
2	18,000	50,000	0.0	4	35,000	TUP DECK
2	12,000	27,000	0.0	4	55,000	TUP DECK
2	6,000	15,500	0.0	2	20,000	TUP DECK
6	12,000	25,000	0.0	4	35,000	TUP DECK
6	12,000	25,000	0.0	4	3,000	TUP DECK
3	0,330	5,750	0.575	57	0.0	TUP DECK
3	35,000	35,000	0.250	1	0.0	TUP DECK
3	0,420	0,830	1,000	12	0.0	SHING

CHESTER CRESSMAN, INC.
TULSA, OKLAHOMA

CREATED IN APRIL 1974
RECEIVED FEB 1975

[illegible]

AC44 3-PTLE STRUCTURE MATERIAL (ISTTC - U.S. NAVY - C. CHERN

AC-9 3-PILE STRUCTURE MATERIAL LISTING -- J.S. NAVY -- C. CHEN

PIPE

NOMINAL DIMENSION (IN. X IN.)	QUANTITY	MEMBER LENGTH (FT.)	TOTAL LENGTH (FT.)	TOTAL WEIGHT (POUNDS)
42.000 O.D. X 1.500 AT	3	21.20	63.60	41103.4
41.000 O.D. X 1.000 AT	3	14.00	42.00	23090.7
41.000 O.D. X 1.000 AT	3	16.00	48.00	12828.2
41.000 O.D. X 1.000 AT	3	6.00	18.00	7696.8
40.000 O.D. X 0.500 AT	3	25.40	76.32	16113.4
40.000 O.D. X 1.500 AT	3	25.40	76.32	10846.6
36.000 O.D. X 1.750 AT	3	50.00	150.00	96110.9
36.000 O.D. X 1.500 AT	3	160.00	480.00	265542.8
36.000 O.D. X 1.250 AT	3	57.00	171.00	79404.2
36.000 O.D. X 1.250 AT	3	22.00	66.00	36607.3
24.000 O.D. X 0.750 AT	3	7.00	21.00	3914.6
20.000 O.D. X 1.000 AT	3	15.86	47.58	8404.9
20.000 O.D. X 0.625 AT	3	54.60	163.80	21204.0
20.000 O.D. X 0.625 AT	3	10.00	30.00	3843.5
18.000 O.D. X 0.500 AT	6	25.40	152.40	14311.4
18.000 O.D. X 0.500 AT	6	24.50	146.28	13682.8
16.000 O.D. X 0.500 AT	6	40.00	240.00	19443.6
16.000 O.D. X 0.500 AT	6	15.15	90.90	7530.9
14.000 O.D. X 0.375 AT	3	29.00	87.00	4751.9
14.000 O.D. X 0.375 AT	3	24.14	72.42	3994.9
12.750 O.D. X 0.500 AT	3	32.05	97.95	6413.5
12.750 O.D. X 0.500 AT	3	29.00	87.00	5096.5
12.750 O.D. X 0.500 AT	6	19.77	118.62	7766.9
12.750 O.D. X 0.500 AT	3	15.15	45.45	2975.9
12.750 O.D. X 0.375 AT	3	19.77	59.31	2942.3
12.750 O.D. X 0.375 AT	2	14.10	28.20	1745.9
6.625 O.D. X 0.240 AT	2	6.10	12.20	541.9

TOTAL WEIGHT OF PIPE MEMBERS = 717073.1

ACMR 3-01LE STRUCTURE MATERIAL LISTING -- U.S. NAVY -- C. CHEN

W SHAPE

NOMINAL DIMENSION	QUANTITY	MEMBER LENGTH (FT)	TOTAL LENGTH (FT)	TOTAL WEIGHT (POUNDS)
W 18 X 50.00	4	55.00	140.00	7000.0
W 18 X 50.00	5	29.00	47.00	4350.0
W 12 X 27.00	4	35.00	140.00	5700.0
W 18 X 27.00	2	25.00	50.00	1200.0
W 8 X 24.00	10	20.00	200.00	4000.0
W 6 X 15.50	2	29.00	58.00	890.0

TOTAL WEIGHT OF W-SHAPE MEMBERS= 22029.0

ACME 3-DITE STRUCTURE MATERIAL LISTING -- U.S. NAVY -- C. CHERN

PLATE

APPROXIMATE DIMENSION
(FT X FT X IN)

QUANTITY

TOTAL AREA
(SQ. FT)

TOTAL WEIGHT
(POUNDS)

0.42 X 0.41 X 1.000
0.31 X 5.75 X 1.575
35.00 X 35.00 X 1.250
20.00 X 25.00 X 0.250

12
57
1
1

4.18
108.16
1225.00
500.00

170.8
1656.2
12505.2
5104.2

TOTAL WEIGHT OF PLATES 19456.3

ACMR 3-PILE STRUCTURE MATERIAL LISTING -- U.S. NAVY -- C. CHEN

CHANNELS

NOMINAL DIMENSION	QUANTITY	LENGTH (FT)	TOTAL LENGTH (FT)	TOTAL WEIGHT (POUNDS)
C 12 X 25.00	4	35.00	140.00	3500.0
C 12 X 25.00	4	3.00	12.00	300.0

TOTAL WEIGHT OF CHANNELS

= 3800.0

TOTAL WEIGHT = 742334.4

BILL OF MATERIALS SUMMARY
 ACAR 3-PILE STRUCTURE MATERIAL LISTING -- U.S. NAVY -- C. CHERRY

ORIGINAL DIMENSION	TOTAL LENGTH (FEET)	TOTAL WEIGHT (POUNDS)
RISA		
42.000 0.0. X 1.500 WT	65.00	41305.43
41.000 0.0. X 1.000 AT	102.00	43015.71
40.000 0.0. X 0.500 WT	140.00	50060.07
36.000 0.0. X 1.750 WT	150.00	94110.04
34.000 0.0. X 1.500 AT	480.00	265542.75
34.000 0.0. X 1.250 AT	237.00	110351.04
24.000 0.0. X 0.750 WT	21.00	3010.59
20.000 0.0. X 1.000 AT	41.00	8408.65
20.000 0.0. X 0.625 WT	193.00	25047.50
14.000 0.0. X 0.500 AT	299.24	27000.20
10.000 0.0. X 0.500 WT	330.90	27410.55
14.000 0.0. X 0.375 AT	160.14	6746.41
12.750 0.0. X 0.500 WT	340.12	22452.74
12.750 0.0. X 0.375 AT	95.31	1728.21
6.625 0.0. X 0.280 WT	18.00	341.86

SHAPE

18 X 50.00	227.00	11350.00
12 X 27.00	140.00	5780.00

[illegible][illegible]

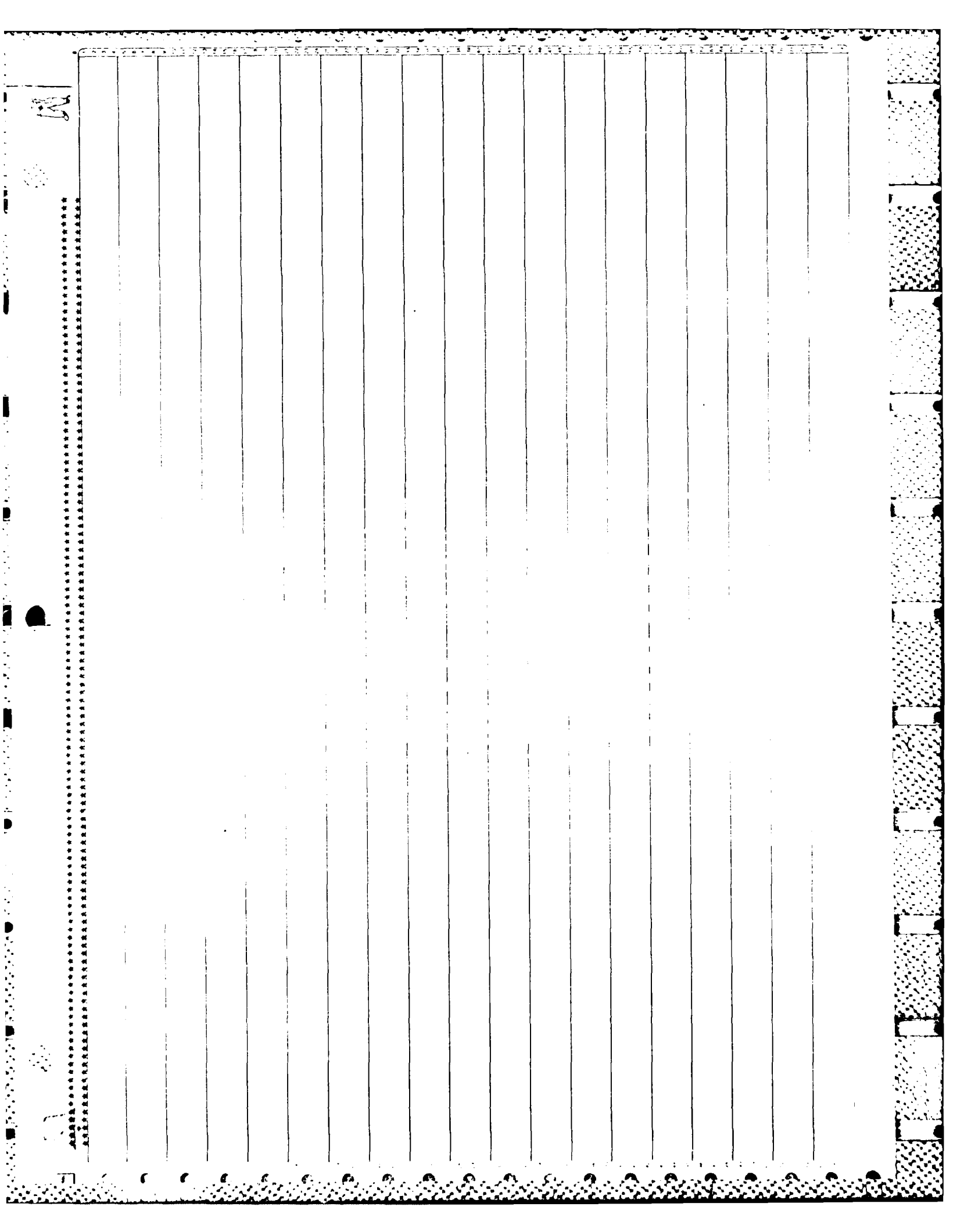
CHANG, S

12 x 25.00	142.00	\$400.00
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PLATE

1.000 THICKNESS	4.14	170.81
0.375 THICKNESS	104.16	1646.14
0.250 THICKNESS	1725.00	17009.47

[illegible]TOTAL AFF (GHT) 702534.44 LHS



ASP JOB NO. = 7978

DATE = 76.124

//LEC9016 JOB (004427050277100PLEC27616).ICHERN 1,PTYPEH,C1ASSEH,C7978

ELAPSED TIME ON MAIN = A = 000.00, START TIME = 10.59.53

DDNAME = SYSMSG
DDNAME = FTF0001
LINES OUTPUT FOR THIS JOB = 000312
PRINTED ON RM027PRI, LINES = 000077
PRINTED ON RM027PRI, LINES = 000235

CARDS FROM MAIN FOR THIS JOB = NONE



1035

7221 5.677.15 7221

410914

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00442705 0221

11 FEB 1964

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13300 JNR OBJECT NAME GROUP=0027 / SPEC=0, DEVIC=002701, PAR
7/LEP0016 JNR (000027,5,127710,6,1FC27016),IC=0000 / PRTV=4,C(AS)=A,(

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ACCTG DATA 0090270500277710101027616

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1880-1881

ALM3LSAS - 55 - 55

1. The first step in the process of creating a new product is to identify a market need. This involves conducting market research to understand what customers want and what problems they are facing. Once a need is identified, the next step is to develop a concept that addresses this need. This is often done through brainstorming sessions with a team of experts and stakeholders. The concept is then refined and a prototype is created. The prototype is used to test the product and gather feedback from potential customers. This feedback is used to make improvements to the product and to develop a marketing strategy. Finally, the product is launched and its success is monitored through sales and customer feedback.

[illegible]

76, 124

1946-1947 01.01.01.96

1921

CLASS A

02.52.51.61 JULY 1964

TELETYPE UNIT TIME 17.15.46.13

1.11.0354714 00.00.20.93

000002 - SILVIA LILLIBRO

100

AD-A164 421

STRUCTURAL CONCEPT ANALYSIS REPORT FOR THE EAST COAST
AIR COMBAT MANEUVER. (U) CREST ENGINEERING INC TULSA OK
MAY 76 27-771-92-APP-C CHES/NAVFAC-FPO-7601-APP-C
N62477-76-C-0179

777

UNCLASSIFIED

F/G 13/13

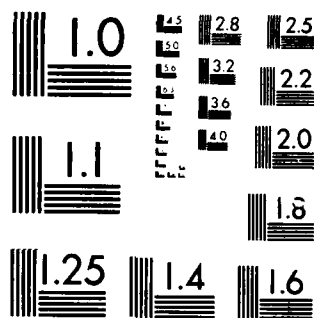
NL

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

15,000,000

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QUEST ALBION, I C.
T 15A, DELANDIA
CREATED IN APRIL 1974
CERTIFIED FEB 1975

[illegible][illegible]

AC-9 T-PIPE SERVICE OF AERIAL LISTING -- BILL OF MATERIALS --

TYPE

AC-9 T-PIPE SERVICE OF AERIAL LISTING -- BILL OF MATERIALS --	QUANTITY	UNIT PRICE	TOTAL PRICE	TOTAL WEIGHT (POUNDS)
36,000 0.00 X 1.750 01	3	5.00	150.00	9630.0
36,000 0.00 X 1.500 01	3	10.00	360.00	24542.4
36,000 0.00 X 1.250 01	3	22.00	720.00	31667.3

TOTAL WEIGHT OF PIPE MATERIALS = 59239.7

TOTAL WEIGHT = 30239.9

BILL OF MATERIALS SUMMARY
 ACME SUPPLY STRUCTURE MATERIAL LISTING -- PIPING -- 18, 20, 24, 30, 36, 42, 48, 54, 60, 66, 72, 78, 84, 90, 96, 102, 108, 114, 120, 126, 132, 138, 144, 150, 156, 162, 168, 174, 180, 186, 192, 198, 204, 210, 216, 222, 228, 234, 240, 246, 252, 258, 264, 270, 276, 282, 288, 294, 300, 306, 312, 318, 324, 330, 336, 342, 348, 354, 360, 366, 372, 378, 384, 390, 396, 402, 408, 414, 420, 426, 432, 438, 444, 450, 456, 462, 468, 474, 480, 486, 492, 498, 504, 510, 516, 522, 528, 534, 540, 546, 552, 558, 564, 570, 576, 582, 588, 594, 600, 606, 612, 618, 624, 630, 636, 642, 648, 654, 660, 666, 672, 678, 684, 690, 696, 702, 708, 714, 720, 726, 732, 738, 744, 750, 756, 762, 768, 774, 780, 786, 792, 798, 804, 810, 816, 822, 828, 834, 840, 846, 852, 858, 864, 870, 876, 882, 888, 894, 900, 906, 912, 918, 924, 930, 936, 942, 948, 954, 960, 966, 972, 978, 984, 990, 996, 1002, 1008, 1014, 1020, 1026, 1032, 1038, 1044, 1050, 1056, 1062, 1068, 1074, 1080, 1086, 1092, 1098, 1104, 1110, 1116, 1122, 1128, 1134, 1140, 1146, 1152, 1158, 1164, 1170, 1176, 1182, 1188, 1194, 1200, 1206, 1212, 1218, 1224, 1230, 1236, 1242, 1248, 1254, 1260, 1266, 1272, 1278, 1284, 1290, 1296, 1302, 1308, 1314, 1320, 1326, 1332, 1338, 1344, 1350, 1356, 1362, 1368, 1374, 1380, 1386, 1392, 1398, 1404, 1410, 1416, 1422, 1428, 1434, 1440, 1446, 1452, 1458, 1464, 1470, 1476, 1482, 1488, 1494, 1500, 1506, 1512, 1518, 1524, 1530, 1536, 1542, 1548, 1554, 1560, 1566, 1572, 1578, 1584, 1590, 1596, 1602, 1608, 1614, 1620, 1626, 1632, 1638, 1644, 1650, 1656, 1662, 1668, 1674, 1680, 1686, 1692, 1698, 1704, 1710, 1716, 1722, 1728, 1734, 1740, 1746, 1752, 1758, 1764, 1770, 1776, 1782, 1788, 1794, 1800, 1806, 1812, 1818, 1824, 1830, 1836, 1842, 1848, 1854, 1860, 1866, 1872, 1878, 1884, 1890, 1896, 1902, 1908, 1914, 1920, 1926, 1932, 1938, 1944, 1950, 1956, 1962, 1968, 1974, 1980, 1986, 1992, 1998, 2004, 2010, 2016, 2022, 2028, 2034, 2040, 2046, 2052, 2058, 2064, 2070, 2076, 2082, 2088, 2094, 2100, 2106, 2112, 2118, 2124, 2130, 2136, 2142, 2148, 2154, 2160, 2166, 2172, 2178, 2184, 2190, 2196, 2202, 2208, 2214, 2220, 2226, 2232, 2238, 2244, 2250, 2256, 2262, 2268, 2274, 2280, 2286, 2292, 2298, 2304, 2310, 2316, 2322, 2328, 2334, 2340, 2346, 2352, 2358, 2364, 2370, 2376, 2382, 2388, 2394, 2400, 2406, 2412, 2418, 2424, 2430, 2436, 2442, 2448, 2454, 2460, 2466, 2472, 2478, 2484, 2490, 2496, 2502, 2508, 2514, 2520, 2526, 2532, 2538, 2544, 2550, 2556, 2562, 2568, 2574, 2580, 2586, 2592, 2598, 2604, 2610, 2616, 2622, 2628, 2634, 2640, 2646, 2652, 2658, 2664, 2670, 2676, 2682, 2688, 2694, 2700, 2706, 2712, 2718, 2724, 2730, 2736, 2742, 2748, 2754, 2760, 2766, 2772, 2778, 2784, 2790, 2796, 2802, 2808, 2814, 2820, 2826, 2832, 2838, 2844, 2850, 2856, 2862, 2868, 2874, 2880, 2886, 2892, 2898, 2904, 2910, 2916, 2922, 2928, 2934, 2940, 2946, 2952, 2958, 2964, 2970, 2976, 2982, 2988, 2994, 3000, 3006, 3012, 3018, 3024, 3030, 3036, 3042, 3048, 3054, 3060, 3066, 3072, 3078, 3084, 3090, 3096, 3102, 3108, 3114, 3120, 3126, 3132, 3138, 3144, 3150, 3156, 3162, 3168, 3174, 3180, 3186, 3192, 3198, 3204, 3210, 3216, 3222, 3228, 3234, 3240, 3246, 3252, 3258, 3264, 3270, 3276, 3282, 3288, 3294, 3300, 3306, 3312, 3318, 3324, 3330, 3336, 3342, 3348, 3354, 3360, 3366, 3372, 3378, 3384, 3390, 3396, 3402, 3408, 3414, 3420, 3426, 3432, 3438, 3444, 3450, 3456, 3462, 3468, 3474, 3480, 3486, 3492, 3498, 3504, 3510, 3516, 3522, 3528, 3534, 3540, 3546, 3552, 3558, 3564, 3570, 3576, 3582, 3588, 3594, 3600, 3606, 3612, 3618, 3624, 3630, 3636, 3642, 3648, 3654, 3660, 3666, 3672, 3678, 3684, 3690, 3696, 3702, 3708, 3714, 3720, 3726, 3732, 3738, 3744, 3750, 3756, 3762, 3768, 3774, 3780, 3786, 3792, 3798, 3804, 3810, 3816, 3822, 3828, 3834, 3840, 3846, 3852, 3858, 3864, 3870, 3876, 3882, 3888, 3894, 3900, 3906, 3912, 3918, 3924, 3930, 3936, 3942, 3948, 3954, 3960, 3966, 3972, 3978, 3984, 3990, 3996, 4002, 4008, 4014, 4020, 4026, 4032, 4038, 4044, 4050, 4056, 4062, 4068, 4074, 4080, 4086, 4092, 4098, 4104, 4110, 4116, 4122, 4128, 4134, 4140, 4146, 4152, 4158, 4164, 4170, 4176, 4182, 4188, 4194, 4200, 4206, 4212, 4218, 4224, 4230, 4236, 4242, 4248, 4254, 4260, 4266, 4272, 4278, 4284, 4290, 4296, 4302, 4308, 4314, 4320, 4326, 4332, 4338, 4344, 4350, 4356, 4362, 4368, 4374, 4380, 4386, 4392, 4398, 4404, 4410, 4416, 4422, 4428, 4434, 4440, 4446, 4452, 4458, 4464, 4470, 4476, 4482, 4488, 4494, 4500, 4506, 4512, 4518, 4524, 4530, 4536, 4542, 4548, 4554, 4560, 4566, 4572, 4578, 4584, 4590, 4596, 4602, 4608, 4614, 4620, 4626, 4632, 4638, 4644, 4650, 4656, 4662, 4668, 4674, 4680, 4686, 4692, 4698, 4704, 4710, 4716, 4722, 4728, 4734, 4740, 4746, 4752, 4758, 4764, 4770, 4776, 4782, 4788, 4794, 4800, 4806, 4812, 4818, 4824, 4830, 4836, 4842, 4848, 4854, 4860, 4866, 4872, 4878, 4884, 4890, 4896, 4902, 4908, 4914, 4920, 4926, 4932, 4938, 4944, 4950, 4956, 4962, 4968, 4974, 4980, 4986, 4992, 4998, 5004, 5010, 5016, 5022, 5028, 5034, 5040, 5046, 5052, 5058, 5064, 5070, 5076, 5082, 5088, 5094, 5100, 5106, 5112, 5118, 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6120, 6126, 6132, 6138, 6144, 6150, 6156, 6162, 6168, 6174, 6180, 6186, 6192, 6198, 6204, 6210, 6216, 6222, 6228, 6234, 6240, 6246, 6252, 6258, 6264, 6270, 6276, 6282, 6288, 6294, 6300, 6306, 6312, 6318, 6324, 6330, 6336, 6342, 6348, 6354, 6360, 6366, 6372, 6378, 6384, 6390, 6396, 6402, 6408, 6414, 6420, 6426, 6432, 6438, 6444, 6450, 6456, 6462, 6468, 6474, 6480, 6486, 6492, 6498, 6504, 6510, 6516, 6522, 6528, 6534, 6540, 6546, 6552, 6558, 6564, 6570, 6576, 6582, 6588, 6594, 6600, 6606, 6612, 6618, 6624, 6630, 6636, 6642, 6648, 6654, 6660, 6666, 6672, 6678, 6684, 6690, 6696, 6702, 6708, 6714, 6720, 6726, 6732, 6738, 6744, 6750, 6756, 6762, 6768, 6774, 6780, 6786, 6792, 6798, 6804, 6810, 6816, 6822, 6828, 6834, 6840, 6846, 6852, 6858, 6864, 6870, 6876, 6882, 6888, 6894, 6900, 6906, 6912, 6918, 6924, 6930, 6936, 6942, 6948, 6954, 6960, 6966, 6972, 6978, 6984, 6990, 6996, 7002, 7008, 7014, 7020, 7026, 7032, 7038, 7044, 7050, 7056, 7062, 7068, 7074, 7080, 7086, 7092, 7098, 7104, 7110, 7116, 7122, 7128, 7134, 7140, 7146, 7152, 7158, 7164, 7170, 7176, 7182, 7188, 7194, 7200, 7206, 7212, 7218, 7224, 7230, 7236, 7242, 7248, 7254, 7260, 7266, 7272, 7278, 7284, 7290, 7296, 7302, 7308, 7314, 7320, 7326, 7332, 7338, 7344, 7350, 7356, 7362, 7368, 7374, 7380, 7386, 7392, 7398, 7404, 7410, 7416, 7422, 7428, 7434, 7440, 7446, 7452, 7458, 7464, 7470, 7476, 7482, 7488, 7494, 7500, 7506, 7512, 7518, 7524, 7530, 7536, 7542, 7548, 7554, 7560, 7566, 7572, 7578, 7584, 7590, 7596, 7602, 7608, 7614, 7620, 7626, 7632, 7638, 7644, 7650, 7656, 7662, 7668, 7674, 7680, 7686, 7692, 7698, 7704, 7710, 7716, 7722, 7728, 7734, 7740, 7746, 7752, 7758, 7764, 7770, 7776, 7782, 7788, 7794, 7800, 7806, 7812, 7818, 7824, 7830, 7836, 7842, 7848, 7854, 7860, 7866, 7872, 7878, 7884, 7890, 7896, 7902, 7908, 7914, 7920, 7926, 7932, 7938, 7944, 7950, 7956, 7962, 7968, 7974, 7980, 7986, 7992, 7998, 8004, 8010, 8016, 8022, 8028, 8034, 8040, 8046, 8052, 8058, 8064, 8070, 8076, 8082, 8088, 8094, 8100, 8106, 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9108, 9114, 9120, 9126, 9132, 9138, 9144, 9150, 9156, 9162, 9168, 9174, 9180, 9186, 9192, 9198, 9204, 9210, 9216, 9222, 9228, 9234, 9240, 9246, 9252, 9258, 9264, 9270, 9276, 9282, 9288, 9294, 9300, 9306, 9312, 9318, 9324, 9330, 9336, 9342, 9348, 9354, 9360, 9366, 9372, 9378, 9384, 9390, 9396, 9402, 9408, 9414, 9420, 9426, 9432, 9438, 9444, 9450, 9456, 9462, 9468, 9474, 9480, 9486, 9492, 9498, 9504, 9510, 9516, 9522, 9528, 9534, 9540, 9546, 9552, 9558, 9564, 9570, 9576, 9582, 9588, 9594, 9600, 9606, 9612, 9618, 9624, 9630, 9636, 9642, 9648, 9654, 9660, 9666, 9672, 9678, 9684, 9690, 9696, 9702, 9708, 9714, 9720, 9726, 9732, 9738, 9744, 9750, 9756, 9762, 9768, 9774, 9780, 9786, 9792, 9798, 9804, 9810, 9816, 9822, 9828, 9834, 9840, 9846, 9852, 9858, 9864, 9870, 9876, 9882, 9888, 9894, 9900, 9906, 9912, 9918, 9924, 9930, 9936, 9942, 9948, 9954, 9960, 9966, 9972, 9978, 9984, 9990, 9996, 10002, 10008, 10014, 10020, 10026, 10032, 10038, 10044, 10050, 10056, 10062, 10068, 10074, 10080, 10086, 10092, 10098, 10104, 10110, 10116, 10122, 10128, 10134, 10140, 10146, 10152, 10158, 10164, 10170, 10176, 10182, 10188, 10194, 10200, 10206, 10212, 10218, 10224, 10230, 10236, 10242, 10248, 10254, 10260, 10266, 10272, 10278, 10284, 10290, 10296, 10302, 10308, 10314, 10320, 10326, 10332, 10338, 10344, 10350, 10356, 10362, 10368, 10374, 10380, 10386, 10392, 10398, 10404, 10410, 10416, 10422, 10428, 10434, 10440, 10446, 10452, 10458, 10464, 10470, 10476, 10482, 10488, 10494, 10500, 10506, 10512, 10518, 10524, 10530, 10536, 10542, 10548, 10554, 10560, 10566, 10572, 10578, 10584, 10590, 10596, 10602, 10608, 10614, 10620, 10626, 10632, 10638, 10644, 10650, 10656, 10662, 10668, 10674, 10680, 10686, 10692, 10698, 10704, 10710, 10716, 10722, 10728, 10734, 10740, 10746, 10752, 10758, 10764, 10770, 10776, 10782, 10788, 10794, 10800, 10806, 10812, 10818, 10824, 10830, 10836, 10842, 10848, 10854, 10860, 10866, 10872, 10878, 10884, 10890, 10896, 10902, 10908, 10914, 10920, 10926, 10932, 10938, 10944, 10950, 10956, 10962, 10968, 10974, 10980, 10986, 10992, 10998, 11004, 11010, 11016, 11022, 11028, 11034, 11040, 11046, 11052, 11058, 11064, 11070, 11076, 11082, 11088, 11094, 11100, 11106, 11112, 11118, 11124, 11130, 11136, 11142, 11148, 11154, 11160, 11166, 11172, 11178, 11184, 11190, 11196, 11202, 11208, 11214, 11220, 11226, 11232, 11238, 11244, 11250, 11256, 11262, 11268, 11274, 11280, 11286, 11292, 11298, 11304, 11310, 11316, 11322, 11328, 11334, 11340, 11346, 11352, 11358, 11364, 11370, 11376, 11382, 11388, 11394, 11400, 11406, 11412, 11418, 11424, 11430, 11436, 11442, 11448, 11454, 11460, 11466, 11472, 11478, 11484, 11490, 11496, 11502, 11508, 11514, 11520, 11526, 11532, 11538, 11544, 11550, 11556, 11562, 11568, 11574, 11580, 11586, 11592, 11598, 11604, 11610, 11616, 11622, 11628, 11634, 11640, 11646, 11652, 11658, 11664, 11670, 11676, 11682, 11688, 11694, 11700, 11706, 11712, 11718, 11724, 11730, 11736, 11742, 11748, 11754, 11760, 11766, 11772, 11778, 11784, 11790, 11796, 11802, 11808, 11814, 11820, 11826, 11832, 11838, 11844, 11850, 11856, 11862, 11868, 11874, 11880, 11886, 11892, 11898, 11904, 11910, 11916, 11922, 11928, 11934, 11940, 11946, 11952, 11958, 11964, 11970, 11976, 11982, 11988, 11994, 12000, 12006, 12012, 12018, 12024, 12030, 12036, 12042, 12048, 12054, 12060, 12066, 12072, 12078, 12084, 12090, 12096, 12102, 12108, 12114, 12120, 12126, 12132, 12138, 12144, 12150, 1215

CHERRY LEE BROS., INC.
7011 S.W. 104TH AVENUE
CORPATEL 10400
CORPATEL 10400

711 SA. 1212A

DATE: 10-11-1978
 1078

ACQUISITION OF MATERIAL SYSTEMS -- INQUIRY

[illegible]

ACME TABLE STRUCTURE MATERIAL LISTING -- 100-100-100-100

DATE

QUANTITY	UNIT	DESCRIPTION	PRICE	TOTAL	TOTAL
(QTY)	(UNIT)	(DESCRIPTION)	(PRICE)	(TOTAL)	(TOTAL)
42,000	0.00	X 1,500	21.20	63.60	6135.0
21,000	0.00	X 1,000	14.00	56.00	25,000.7
41,000	0.00	X 1,000	14.00	56.00	12024.2
41,000	0.00	X 1,000	14.00	56.00	7000.0
20,000	0.00	X 1,500	21.20	63.60	16113.0
20,000	0.00	X 1,500	21.20	63.60	10000.0
20,000	0.00	X 1,500	21.20	63.60	3910.6
20,000	0.00	X 1,500	21.20	63.60	2018.0
20,000	0.00	X 1,500	21.20	63.60	2120.0
20,000	0.00	X 1,500	21.20	63.60	4005.5
20,000	0.00	X 1,500	21.20	63.60	10311.0
20,000	0.00	X 1,500	21.20	63.60	13642.8
20,000	0.00	X 1,500	21.20	63.60	19005.6
20,000	0.00	X 1,500	21.20	63.60	7530.0
20,000	0.00	X 1,500	21.20	63.60	4751.0
20,000	0.00	X 1,500	21.20	63.60	5900.0
20,000	0.00	X 1,500	21.20	63.60	7766.0
20,000	0.00	X 1,500	21.20	63.60	2075.0
20,000	0.00	X 1,500	21.20	63.60	2000.3

TOTAL PRICE IN US DOLLARS = 251130.6

TOTAL PRICE = 251130.6

ADONIS 0013792X8000030U

DATE	DESCRIPTION	AMOUNT	CHECK NO.	BANK	INITIALS
12-15-51	PAYROLL	12.00	100	CHASE	ABC
12-22-51	PAYROLL	12.00	101	CHASE	ABC
12-29-51	PAYROLL	12.00	102	CHASE	ABC
1-5-52	PAYROLL	12.00	103	CHASE	ABC
1-12-52	PAYROLL	12.00	104	CHASE	ABC
1-19-52	PAYROLL	12.00	105	CHASE	ABC
1-26-52	PAYROLL	12.00	106	CHASE	ABC
2-2-52	PAYROLL	12.00	107	CHASE	ABC
2-9-52	PAYROLL	12.00	108	CHASE	ABC
2-16-52	PAYROLL	12.00	109	CHASE	ABC
2-23-52	PAYROLL	12.00	110	CHASE	ABC
2-30-52	PAYROLL	12.00	111	CHASE	ABC
3-6-52	PAYROLL	12.00	112	CHASE	ABC
3-13-52	PAYROLL	12.00	113	CHASE	ABC
3-20-52	PAYROLL	12.00	114	CHASE	ABC
3-27-52	PAYROLL	12.00	115	CHASE	ABC
4-3-52	PAYROLL	12.00	116	CHASE	ABC
4-10-52	PAYROLL	12.00	117	CHASE	ABC
4-17-52	PAYROLL	12.00	118	CHASE	ABC
4-24-52	PAYROLL	12.00	119	CHASE	ABC
5-1-52	PAYROLL	12.00	120	CHASE	ABC
5-8-52	PAYROLL	12.00	121	CHASE	ABC
5-15-52	PAYROLL	12.00	122	CHASE	ABC
5-22-52	PAYROLL	12.00	123	CHASE	ABC
5-29-52	PAYROLL	12.00	124	CHASE	ABC
6-5-52	PAYROLL	12.00	125	CHASE	ABC
6-12-52	PAYROLL	12.00	126	CHASE	ABC
6-19-52	PAYROLL	12.00	127	CHASE	ABC
6-26-52	PAYROLL	12.00	128	CHASE	ABC
7-3-52	PAYROLL	12.00	129	CHASE	ABC
7-10-52	PAYROLL	12.00	130	CHASE	ABC
7-17-52	PAYROLL	12.00	131	CHASE	ABC
7-24-52	PAYROLL	12.00	132	CHASE	ABC
7-31-52	PAYROLL	12.00	133	CHASE	ABC
8-7-52	PAYROLL	12.00	134	CHASE	ABC
8-14-52	PAYROLL	12.00	135	CHASE	ABC
8-21-52	PAYROLL	12.00	136	CHASE	ABC
8-28-52	PAYROLL	12.00	137	CHASE	ABC
9-4-52	PAYROLL	12.00	138	CHASE	ABC
9-11-52	PAYROLL	12.00	139	CHASE	ABC
9-18-52	PAYROLL	12.00	140	CHASE	ABC
9-25-52	PAYROLL	12.00	141	CHASE	ABC
10-2-52	PAYROLL	12.00	142	CHASE	ABC
10-9-52	PAYROLL	12.00	143	CHASE	ABC
10-16-52	PAYROLL	12.00	144	CHASE	ABC
10-23-52	PAYROLL	12.00	145	CHASE	ABC
10-30-52	PAYROLL	12.00	146	CHASE	ABC
11-6-52	PAYROLL	12.00	147	CHASE	ABC
11-13-52	PAYROLL	12.00	148	CHASE	ABC
11-20-52	PAYROLL	12.00	149	CHASE	ABC
11-27-52	PAYROLL	12.00	150	CHASE	ABC
12-4-52	PAYROLL	12.00	151	CHASE	ABC
12-11-52	PAYROLL	12.00	152	CHASE	ABC
12-18-52	PAYROLL	12.00	153	CHASE	ABC
12-25-52	PAYROLL	12.00	154	CHASE	ABC
1-1-53	PAYROLL	12.00	155	CHASE	ABC
1-8-53	PAYROLL	12.00	156	CHASE	ABC
1-15-53	PAYROLL	12.00	157	CHASE	ABC
1-22-53	PAYROLL	12.00	158	CHASE	ABC
1-29-53	PAYROLL	12.00	159	CHASE	ABC
2-5-53	PAYROLL	12.00	160	CHASE	ABC
2-12-53	PAYROLL	12.00	161	CHASE	ABC
2-19-53	PAYROLL	12.00	162	CHASE	ABC
2-26-53	PAYROLL	12.00	163	CHASE	ABC
3-5-53	PAYROLL	12.00	164	CHASE	ABC

TOTAL 46,1541

251930. 47 1 MS

WILLIAM W. BROWN, JR., PRESIDENT
JAMES H. BROWN, VICE-PRESIDENT
JOHN W. BROWN, SECRETARY
JOHN W. BROWN, TREASURER
JOHN W. BROWN, CLERK

ACQUA 3-0016 STRUCTURE MATERIAL LISTING -- SUBMITTER CODE: U.S. NAVY--C. 00000

PIPE

QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT
1	2	3	4	5	6	7	8	9	10
36.000	0.00	X	1.250	MT	57.00	171.00	79000.2		
12.750	0.00	X	3.500	MT	57.00	171.00	6013.5		
12.750	0.00	X	3.500	MT	57.00	171.00	5646.5		
12.750	0.00	X	3.575	MT	57.00	171.00	1745.0		
6.625	0.00	X	0.280	MT	57.00	171.00	301.0		

TOTAL WEIGHT OF PIPE MEMBERS = 93601.2

ACME RAPID STRUCTURE SPECIAL LISTING -- SUBMITTABLE TO U.S. AIR FORCE, CHINA

PLATE

ORIGINAL DIMENSION (FT X FT X IN)	QUANTITY	TOTAL AREA (SQ. FT.)	TOTAL WEIGHT (POUNDS)
3.42 X 0.85 X 1.00	12	3.42	170.4
3.33 X 5.75 X 1.875	57	19.16	1656.2
35.00 X 35.00 X 0.250	1	1225.00	12500.2
20.00 X 25.00 X 0.25	1	500.00	5100.2

TOTAL WEIGHT OF PLATES = 19956.8

ARMY 3-DAY STRUCTURE MATERIAL LISTING -- 5 DECEMBER 1964 -- U.S. ARMY-CORPS

CHANNELS

MATERIAL DESCRIPTION		QUANTITY	CHANNELS AS SHOWN (FT)	Y TO HEIGHT (FT)	TOTAL HEIGHT (FOOTING)
C	12 x 25.00	4	35.00	140.00	3500.00
F	12 x 25.00	3	3.00	12.00	360.00

TOTAL HEIGHT OF CHANNELS

= 3860.0

TOTAL HEIGHT = 13867.1

RTII OF MATERIALS QUANTITY
 APPO 3-0115 STA PUMP MATERIAL LISTING -- SCHEDULE 40 -- 15.75' AVAIL -- (CPR)

TOTAL DIAMETER Y VAL 15.75' T VAL 15.75' T VAL 15.75'

PIPE

36.000 N.D. X 1.250 AT	171.00	10100.10
12.750 N.D. X 0.500 AT	184.00	12100.07
12.750 N.D. X 0.375 AT	36.00	1785.32
6.625 N.D. X 0.250 AT	18.00	301.06

W SHAPE

W 18 X 59.00	227.00	11350.00
W 12 X 27.00	100.00	3780.00
W 8 X 24.00	250.00	6100.00
W 6 X 15.50	59.00	1000.00

CHANNELS

C 12 X 25.00	152.00	3400.00
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ACROSS THE STREETS OF THE CITY, --

ACORD 30916 SIOCTV-8 ATRIAL LITIG - 504457-1

• 1919 •

DATE

1.100 JUL 1955

4, 2

17.21

0.575 1410.555
0.250 1410.555

1.14.15
1725.10

1050.10
1700.27

551 7471 1527

1700. 37

1951-1952

136-17,18,19,20

1921 = 74.12%

433

5

15

END

FILMED

4-86

DTIC